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MANUFACTURING GROWTH IN THE TENNESSEE VALLEY: TRENDS AND PROSPECTS[1]

*Allan G. Pulsipher, Robert W. Gilmer, and Hubert Hinote**

Manufacturing employment in the Tennessee Valley[2] grew at rates far faster than in other parts of the U.S. from the 1950s to the early 1970s. By the late 1960s, the 170-county area for which the Tennessee Valley Authority (TVA) generates electricity was relatively specialized in manufacturing, with about 30.0 percent of its workers in manufacturing in contrast to 23.0 percent in the U.S. as a whole. In recent years, the growth of the Valley's manufacturing sector has slowed down. The region's manufacturers were hit very hard by the 1980-1982 recession, as high interest rates crippled markets in construction, autos, and durable goods.[3] But the slowdown began well before the recession. Measured between the last two peaks in the business cycle, 1973 and 1979, regional manufacturing employment grew at less than 1.0 percent per year, compared with an annual rate of 3.3 percent between the previous two peaks, 1969 and 1973.

Will manufacturing growth continue to slow? Will it decline? Or, will the comparative advantages of the region that led to the growth spurt of the 1960s and early 1970s reassert themselves?

There is no single, dominant factor that explains the slower growth of manufacturing in recent years. Slower capital formation, increased energy costs, rising regional wages, stronger foreign competition, and the changing technology of manufacturing each played a role. However, we believe that manufacturing will remain an important sector of the regional economy and a larger part of the economy in the Tennessee Valley than in the nation considered as a whole. The hangover from the dismal economic performance of the early 1980s will end eventually and growth in manufacturing output and employment resume, but at a more moderate pace than was experienced in the 1969-to-early-1970 period. To explain this forecast, this article examines long-term trends in the Tennessee Valley manufacturing base, looking for both explanations of its slower growth in the late 1970s and implications of this slowdown for the future.

The Role of Manufacturing in the Tennessee Valley

The rapid growth of manufacturing in the TVA region through the 1960s and early 1970s is recorded in Table 1. Employment grew 5.0 percent per year from 1960-1969 and 3.3 percent per year from 1969-1973. Production grew 8.4 percent per year from 1969-1973. Rates of growth fell off sharply in the 1973-1979 period and became negative during the 1980-1982 recession. However, more disturbing is the comparison to the U.S., also shown in Table 1. Between 1960 and 1973, the region clearly outperformed the nation in manufacturing growth. But this lead virtually disappeared after 1973, and the TVA region did worse than the nation over the course of the latest recession.

Table 1
MANUFACTURING GROWTH RATES IN THE U.S. AND THE TENNESSEE VALLEY, 1960-1982
(Percent Per Year)

	Employment			Production		
Years[1]	U.S.	TVA	Difference[2]	U.S.	TVA	Difference[2]
1960-1969	2.1	5.0	2.9	5.5	N.A.	N.A.
1969-1973	0.0	3.3	3.3	3.0	8.4	5.4
1973-1979	0.6	0.8	0.2	2.7	2.8	0.1
1979-1982	-3.5	-3.9	-0.4	-3.0	-3.9	-0.9

[1]End years measure periods between peaks in the business cycle, except 1979-1982, which is peak to trough of the most recent recession.
[2]TVA minus U.S.
N.A. = not available.

Why did manufacturing in the Valley grow so rapidly in the 1960s? Perhaps the key factor was a widespread trend toward the standardization and simplification of manufacturing processes. Most industries pass through a life cycle. After a product matures, it no longer undergoes frequent design changes. The manufacturing process becomes routinized, standardized, and no longer requires skilled hand operations or the oversight of an engineering staff. Many manufacturing processes "matured" in the 1960s, and firms exploited the opportunity that standardization afforded them to cut production costs by locating production facilities in small cities or rural areas where construction costs, wages, and taxes were lower.[4] The low wages of the Tennessee Valley, like the rest of the rural South, proved a magnet for manufacturing development during this decentralization of U.S. industry.

The length and extent of this boom in the region was primarily due to the unusually large amount of surplus labor available in the Tennessee Valley at the time. The U.S. had been undergoing a major transfer of employment from farm to factory throughout the twentieth century.

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The TVA region participated in but lagged behind this trend, so that 20.0 percent of the Valley's work force was still on the farm in the late 1950s—compared to fewer than 10.0 percent left on the farm as an average nationwide. By 1973, as the manufacturing boom apparently peaked, only 5.0 percent of the region's work force was still left on the farm, a figure more in line with the 4.0 percent rate in the U.S.

A second important factor was that the expansion of job opportunities in the Tennessee Valley drew many new workers into the labor force. In 1959, 62.0 percent of the Valley's working-age population was employed; by 1973, 75.0 percent of those of working age held jobs. In addition, as a consequence of the manufacturing boom, the region's long history of outward migration ended in the 1970s, and the region began to draw workers from outside the Tennessee Valley.

Surprisingly, the tapping of the region's rural labor surplus and the expansion in the proportion of the working age participating in the labor force was accomplished without an increase in relative wages. Manufacturing wages held steady in the Tennessee Valley at about 78.0 percent of the U.S. average from 1959 to 1973. Thus, the region's specialization in manufacturing was a result of elastic labor supplies, allowing the manufacturing expansion to continue for over a decade without bidding relative wages upward—despite a sizable and sustained increase in demand for the services of the region's workers.

Long-Term Patterns of Manufacturing Growth

Over the next two decades, what factors will shape the pattern of manufacturing growth in the Tennessee Valley? The current Tennessee Valley Authority forecast for manufacturing employment and production is summarized in Table 2. It foresees continued manufacturing growth in the region, at rates that will once more exceed those of the U.S. Between 1979 and 1985, the hangover from the current recession and the uneven impact of macroeconomic policy in the Tennessee Valley[3] are expected to slow manufacturing growth and temporarily depress it below national norms. However, relatively healthy growth is anticipated to resume after 1985—at rates well below those of the 1960s and early 1970s, but above the 1973-1979 period (see Table 1). From 1985 to 2000, the manufacturing base of the region is expected to again grow faster than the U.S., averaging 1.0 percent per year faster in employment and 1.4 percent per year faster in production growth. This forecast of future growth results from our analysis of electricity rates, wages, foreign competition, and changing manufacturing technology, which is summarized in subsequent sections.

Electricity Rates and Manufacturing Growth

The late 1970s was a traumatic period for the U.S. economy. Chronic inflation, falling productivity, foreign competition, and a succession of energy price shocks all contributed to slow and uneven growth. In the Tennessee Valley, a region of historically cheap electricity, the sharp increases in TVA electric rates reflected, and contributed to, this turmoil. TVA's rates for its largest customers from 1970-1981 are shown in Table 3. In 1970, TVA's industrial rates were twice the remarkably low rates of the Bonneville Power Administration (BPA), but still only half those of large, coal-fired utilities serving significant industrial loads in the Midwest. By 1981, TVA's rates were five times those of BPA and even slightly higher than those of the Midwest coal-fired plants.

Table 2
MANUFACTURING GROWTH RATES IN THE U.S. AND THE TENNESSEE VALLEY, FORECAST FOR 1979-2000

	Employment			Production		
Years	U.S.	TVA	Difference[1]	U.S.	TVA	Difference[1]
1979-1985	-0.9	-0.5	0.4	1.1	1.4	0.3
1985-1990	0.2	2.1	1.9	2.7	5.2	2.5
1990-2000	0.0	1.0	1.0	2.7	4.0	1.3
1979-2000	-0.2	0.8	1.0	2.2	3.6	1.4

[1]TVA minus U.S.

Source: Chief Economist Staff, Tennessee Valley Authority, *Economic Outlook* (July 1983).

Table 3
RATES PAID BY LARGE INDUSTRIAL CUSTOMERS FOR ELECTRICITY
(Cents/kWh)

Utility	Rates Paid By:	1970	1975	1980	1981
TVA	Large industry[1]	0.48	1.04	2.71	3.22
BPA	Large industry[1]	0.20	0.25	0.40	0.61
Four large, coal-fired utilities[2]	All industry	0.91	1.73	2.62	2.87
U.S.[3]	All industry	0.95	1.92	3.41	4.02

[1]Directly served industry.

[2]The four utilities chosen all are in the Midwest and serve large industrial loads.

[3]Investor-owned utilities only.

Sources: Tennessee Valley Authority, *Annual Reports*, various years, 1970-1981; Bonneville Power Administration, *Generation and Sales Statistics*, various years, 1970-1981; Edison Electric Institute, *Statistical Yearbook of the Electric Utility Industry, 1981*; Compustat and personal communications with Data Resources, Inc., provided the data on the four coal-based utilities.

Several factors were responsible for these increases. First, during the decade TVA had to finance its construction program by borrowing in capital markets where interest rates rose sharply in the 1970s—rather than as in the past, relying upon interest-free appropriations from the federal government. Second, much of the rest of the electric utility industry began to share with TVA the efficiencies and economies of being large, integrated power systems. Third, the demand in the region outgrew its hydroelectric generating potential, resulting in nearly 90.0 percent of TVA power being coal or nuclear in origin by the end of the decade. As coal prices escalated during the inflation-plagued 1970s, so did the cost to TVA of producing electricity. Moreover, because the legislation that created TVA requires that all the benefits of hydroelectric generation be allocated to residential consumers, so far as

TVA's industrial customers are concerned, TVA is strictly coal- and nuclear-based with no direct hydroelectric benefits.

However, we believe that, although rising electric rates contributed to the manufacturing slowdown of the 1970s, they should be assessed only a modest role.

The TVA region attracted several large electricity-consuming industries in the 1950s and 1960s through the low electric rates prevailing at the time. Primary aluminum, ferroalloys, chlorine, and phosphorus are all industries with costs dominated by electric rates, industries that have traditionally located where cheap, surplus electricity could be found. The cheap hydroelectricity of the Tennessee and Columbia rivers, natural gas in the Southwest, and coal in the Midwest geographically concentrated these industries in a few energy-rich regions. It is these "electricity-seeking" industries that have been most affected by rising electric rates.[6]

These highly electric-sensitive industries, however, contributed only modestly to manufacturing employment and output growth in the 1960s and 1970s. They are indeed economically important to the region, providing some of its best-paid jobs, but they have not been the mainspring of economic growth for at least two decades. As Table 4 shows, from 1960-1969 the region created an average of 26,807 additional manufacturing jobs each year. From 1969-1973, it created an average of 23,556 additional jobs each year. But from 1973-1979, an annual average of only 6,128 additional manufacturing jobs were created. The electricity-sensitive industries—aluminum, ferroalloys, chlorine, and phosphorus—contributed only 15.0 percent of additional jobs in the 1960 to 1969 period and considerably fewer in both relative and absolute terms after that.

The other industry groups shown in Table 4—traditional Southern low-wage industries; machinery and transportation equipment; and construction-sensitive industries—like the electric-sensitive grouping, have been or are potential trouble spots in the manufacturing sector. From 1960-1973, these four industrial groups created 65.0 to 80.0 percent, depending on the year, of the region's additional manufacturing jobs. But from 1973-1979, they contributed only 26.0 percent of a much smaller number of additional jobs. Employment growth shifted to food processing, paper, printing and publishing, and other general manufacturing industries. If low-wage and construction-sensitive industries (neither of which are influenced very strongly by electric rates) had remained healthy, the employment impact from the slow growth of the electric-intensive industries would have been barely noticeable.

In evaluating the impact of electric rates on manufacturing growth in the future, it is important to recognize that the Tennessee Valley was only the first of the nation's oases of cheap, domestic power to dry up. The others have now followed. The nuclear construction problems of the Washington Public Power Supply System (WPPSS) have ended the era of remarkably low rates in the Pacific Northwest; natural gas price decontrol begun in 1978 has done the same for the Southwest. Thus, there are few, if any, domestic alternatives for these electricity-seeking firms. The realistic alternatives for new plant construction in these industries are concentrated in Canada. Canada has surplus hydroelectricity, is politically "safe"—in contrast to Brazil or the Middle East—and it is located near North American markets. Canadian electricity may be a limited resource for these industries, however, and it is not likely to displace existing U.S. capacity.

TVA's competitive rate position is expected to continue to improve in the future. TVA's current rate forecast indicates that by 1990 its industrial rates will be among the lowest in the Southeast and its residential rates among the lowest in the U.S. Price stability in coal markets, reduced employment, and a scaled-back nuclear construction program are likely to keep future TVA rate increases at or below those of other utilities. Thus, we believe escalating electric rates in the TVA region will not be a drag on manufacturing growth in the future.

Construction-Related Manufacturing

A second group of industries that were contributors to the slowdown in regional manufacturing growth between

Table 4
JOB CREATION IN THE TVA REGION BY SELECTED GROUPS OF INDUSTRIES[1]

Year	Total Manufacturing	Low-Wage	Construction-Sensitive	Machinery and Transportation Equipment	Electricity-Sensitive	All Groups
			Average Annual Additional Manufacturing Jobs Each Year, Selected Periods, 1960 to 1979			
1960-1969	26,807	8,482	1,842	7,905	4,012	22,241
1969-1973	23,556	8,572	3,669	7,163	- 667	16,134
1973-1979	6,128	-3,277	581	4,489	484	1,592
			Percent of Manufacturing Jobs Created			
1960-1969	100.0	31.6	6.9	29.5	15.0	83.0
1969-1973	100.0	36.4	15.6	30.4	- 2.8	68.5
1973-1979	100.0	-53.5	9.5	73.3	7.9	26.0

[1]Low-wage industries are lumber, furniture, textiles, apparel, and leather; construction-sensitive industries are wood, lumber, and stone, clay, and glass; machinery includes both electric and nonelectric machinery and is added to transportation equipment; electric-sensitive industries are primary metals plus chemicals. The total of "All Groups" excludes any overlap in these definitions.

1973 and 1979 are those related to construction activity. The construction industry in the TVA region and the U.S. exhibited relatively little growth in output or employment in the mid-to-late 1970s.

Interest rates rose sharply with the inflationary surge of the late 1970s, pushing up the cost of housing and forcing many customers out of the home market. Interest rates rose even more sharply in 1979, as monetary policy was used as a cure for inflationary expectations. A construction industry that was stagnant in the late 1970s became badly depressed during the 1980-1982 recession.

The problems of the construction industry are transmitted directly and quickly to the manufacturing sector. Table 4 shows 2,500 new jobs created each year in construction-related industries from 1960-1973 but a sharp slowdown to 581 new jobs per year from 1973-1979. Fortunately, this pause in construction is a cyclical phenomenon, with longer term trends in construction related closely to growth in population and personal income. Interest rates are not expected to escalate again as the current economic expansion progresses because, for the first time in four years, the current monetary targets of the Federal Reserve System are consistent with the price, production, and productivity trends in the overall economy. Thus, we anticipate a modest resurgence, or at least revival, of construction activity. A revival of construction-related manufacturing should follow fairly quickly.

Rising Wages in the Tennessee Valley

If low wages were the primary lure that drew manufacturing to the TVA region, have wage increases been the brake on its recent development? Rising wages bring other important rewards, but they can also make a region less attractive for industrial development. As Table 5 shows, there was substantial stability in relative wages from 1959-1973, with regional wages averaging a very steady 78.0 percent of U.S. levels in all sectors including manufacturing.[7] As discussed previously, this 22 percentage-point differential—and its failure to close with rapid growth—was a key to the region's manufacturing development.

Table 5
WAGES AND SALARIES PER EMPLOYEE[1] IN THE TVA REGION RELATIVE TO THOSE OF THE U.S., 1959-1979
(Percent)

	Year			
	1959	1969	1973	1979
Manufacturing wages	77.9	77.9	77.6	80.1
Wages in all sectors	77.6	76.7	78.0	82.4

[1]Wages, salaries, and nonfarm proprietors' income divided by the total number of workers or proprietors.

After 1973, however, the historic relative wage stability of the region weakened. Wages relative to the U.S. rose 4.4 percentage points in all sectors and 2.5 percentage points in manufacturing between 1973 and 1979. Although statistical evidence on inflation in the TVA region is spotty,[8] it seems likely that these relative wage increases are real—i.e., they are not merely reflections of higher living costs. There is little evidence that inflation from 1973-1979 affected the Tennessee Valley differently than the U.S., and if proper price deflators were applied to the wage data used to compute the values shown in Table 5, relative wages would still have increased by a similar amount.

The available price data indicate that the cost of living in the Tennessee Valley remains at 90.0 percent or so of the U.S. average. This means that perhaps half of the apparent 20.0 percent wage differential between the Valley and the U.S. is explainable by lower living costs. Differences in skill levels or education may explain some part of the remaining difference, but no studies have suggested that the Southern worker is nearly that much less productive than his counterpart elsewhere. Thus, a 10.0 percent *real* differential in wages remains, and the Tennessee Valley continues to offer a pool of relatively inexpensive, productive labor. Closing this differential by perhaps one or two percentage points in the 1970s, as the data suggest, is not a persuasive explanation of a widespread slowdown in the region's industrial growth, or to be enough of an increase to foreclose future development. Therefore, rising relative wages, like electric rates, may be one part of the explanation of slower manufacturing growth in the Valley, but it cannot be assessed a dominant role.

Losses to Foreign Competition: A Grain of Salt for the Conventional Widsom

The U.S. has been badly hurt by foreign trade in some key manufacturing sectors—steel, autos, consumer textiles, and apparel among them. It has run chronic deficits in merchandise trade because of oil imports. However, to narrowly focus attention on these few sectors (even if they have forced some widespread industrial adjustments) is to ignore the solid competitive position the U.S. maintains in foreign trade.[9] The U.S. no longer dominates world trade as it did after World War II, it does not run huge trade surpluses in manufacturing goods like the Japanese, and deficits in primary goods continue because of oil imports. To balance this view, however, it should be recognized that the breakdown of the Bretton Woods system in 1973 caused the dollar to depreciate by 25.0 percent and returned U.S. labor costs to a strongly competitive international position by the mid-1970s. Throughout the 1970s the U.S. ran small surpluses in manufactured goods; its deficits in oil were largely offset by grain exports, unlike Japan or the European Community. Moreover, the U.S. share of the world's total production, output of manufactured goods, and employment was stable throughout the 1970s. Thus, any explanation of how foreign competition hurt the TVA region has to be specific to those sectors that were indeed hurt by imports. Sustained U.S. surpluses in manufactured goods make it an unpersuasive explanation of overall decline.

The problems of industries that are widely perceived to have been hurt by competition from abroad do not translate automatically into problems in the Tennessee Valley even though the industry may be well represented

in the region. For example, the primary metals industry epitomizes the type of "smoke stack" industry that has been the focus of concern about the weakening competitiveness of U.S. manufacturing. At the core of this concern are the high relative costs of the country's large, integrated steel producers. The Tennessee Valley's primary metals industry, however, is heavily weighted toward aluminum, with only one-fourth of its payrolls in steel; and the iron and steel segment is largely composed of small, modern "mini-mills" serving local markets and using advanced, competitive technology.

On the other hand, despite overall stability of textile imports at 5.0 percent of the U.S. market, some consumer textile and apparel industries clearly have been hurt badly by imports. Carpets and rugs are one example of this in the TVA region, with imports growing from 2.0 to 5.0 percent of the market in the 1970s. But the heart of the TVA region's textile industry is in synthetic fiber production and knitwear; these sectors have thus far proven relatively immune to foreign competition. The bulk of the apparel production in the Tennessee Valley is men's and women's outerwear, and imports rose in the 1970s from 7.0 to 15.0 percent of the domestic market. The rise of the "Gang of Four"--Korea, Taiwan, Hong Kong, and Singapore—as manufacturing powers meant that the region's relatively cheap domestic labor lost to even cheaper labor in these rapidly developing nations.

Problems in the textile and apparel industries have almost certainly hurt the job-creating potential of the TVA region. It can be seen in Table 4 that low-wage industries, which include textiles and apparel, created 8,500 jobs per year from 1960 to 1973. From 1973 to 1979, there was a net *loss* of 3,300 jobs each year, with textiles responsible for over half the annual losses and apparel responsible for another 25.0 percent.

Care must be taken in interpreting this result, however. In both the Tennessee Valley and the U.S., *production* has continued to rise in both industries. This is because of productivity gains due first to new production methods and capital equipment, and second, to the transfer of the most labor-intensive segments of these industries to other countries. Further, the rate of job loss to the region has not been as severe to the U.S. as a whole for the apparel and textile industries. Measured in proportion to employment in the two industries, the U.S. lost two and one-half times as many jobs as did the Tennessee Valley. On balance, this means that although jobs were lost, the jobs that were left tended to be higher paying ones with a better future and chance to survive the challenge of international competition. In the future we expect that the Valley's wage and other advantages will lead to a resumption of modest growth in the "traditional low-wage" industries, but this forecast must be considered one of the cloudiest parts of the always murky future.

The Evolution of Manufacturing Technology: The Valley's Future Challenge

As described above, the story of American manufacturing in the 1960s was the transition to standardize and routinize production. Skill levels were reduced, cheap labor and rural locations were sought to cut operating costs, and manufacturing was dispersed away from corporate headquarters and urban areas. This decentralization of standardized manufacturing processes combined with the Tennessee Valley's less costly labor and other advantages to bring about rapid regional growth. However, much of the rest of the world also learned these lessons quickly, as standardized manufacturing became widely used on an international scale. Just as manufacturing dispersed throughout the U.S. in the 1960s, it dispersed throughout the world in the 1970s.

Many believe that the story of manufacturing in the 1980s and 1990s will be one of using new technology in flexible ways to produce more "knowledge-intensive," specialized products. Table 6 divides U.S. manufacturing trade balances into nonresearch-intensive and research-intensive categories, as defined by the Council of Economic Advisers. Nonresearch-intensive manufactures were a steady contributor to trade deficits through the 1970s but held their own in the sense that the deficits deteriorated modestly as a percentage of GDP from 1972-1979. In contrast, research-intensive manufactures were a strong contributor to trade surpluses in the 1970s, and these surpluses increased by 75.3 percent if measured as a fraction of GDP. If this trend continues, it suggests that the U.S. will slowly shift its manufacturing base away from standardized manufacturing and toward a mix featuring more flexible, research-intensive manufacturing.

Table 6
U.S. MANUFACTURING TRADE BALANCES AS A PERCENT OF GROSS DOMESTIC PRODUCT, 1972-1979

	1972	1979
Nonresearch-intensive manufactures	-1.27	-1.44
Research-intensive manufactures	0.93	1.63
Total manufactures	-0.34	0.19

Source: Council of Economic Advisers, *Economic Report of the President* (Washington, D.C.: USGPO, 1983), Table 3-4, p. 58.

According to this view, the new flexible manufacturing systems will not be locked into long runs of standardized goods. They will make small volume, high quality, highly specialized goods. They will seek new niches created by evolving technology and quickly adapt to changing markets. To make these small runs, the flexible factory will be home to automated controls, microcomputers, new materials, and new technologies. Production flow and rates will be by computer-assisted numerical controls combined with robotics. It will be the application of high technology to current production.

Such an evolution of manufacturing clearly would leave the Tennessee Valley at a crossroads. Despite its huge manufacturing base, it has had little success in drawing corporate headquarters with their research and engineering functions to the region. Funding for education at all levels badly lags the rest of the nation, and research activity, although certainly not absent, clearly is less prevalent in the region than in the nation. The Valley's economic history has been strongly tied to less costly labor

and standardized manufacturing. The evolution of flexible systems and higher skills will develop slowly but will present the TVA region with the challenge—and opportunity—of upgrading its work force to meet the requirements of the modern factory. Old manufacturing jobs will not disappear rapidly, but new jobs will increasingly require a higher level of training and skills than has been the case in the past.

Conclusion

The manufacturing base of the Tennessee Valley is unlikely to return to the rapid growth experienced in the 1960s and early 1970s. Several factors are responsible for the slower growth experienced in recent years—high interest rates, rising electricity rates, rising wages, and foreign competition. However, manufacturing can be expected to continue to play a major role in the TVA region's economic development. The Tennessee Valley has the advantages of a sunbelt climate, excellent transportation, an extremely pleasant environment, and location near the Midwest industrial belt. Electricity rates are unlikely to disrupt this growth, and a pool of productive labor is available at favorable wages. A revival of construction activity will accompany economic recovery. The region has lost some of its industry to foreign competition but generally has proven more resilient to imports than its specialization in relatively low-wage manufacturing might suggest.

The major question that overhangs the future of the TVA region's manufacturing base is its ability to move out of standardized manufacturing, as the nation's manufacturing growth seems likely to turn toward more research-oriented, more flexible factories. The region's manufacturing base has been built on cheap labor and standardized manufacturing. As a major industrial region of the U.S., however, it seems likely that these applications of high technology will make inroads in the region's factories; the Tennessee Valley must evolve with the nation away from old production methods. There is an inherent risk to a forecast of rapid growth for the TVA region if it fails to make the transition. Provision of the necessary skills for future factories offers the region a real challenge in upgrading its work force, but it is also an important opportunity for improving wages and the standard of living in the Tennessee Valley. Successful adaptation of new technologies, new production methods, and new skills by Tennessee Valley industries can ensure the manufacturing sector a vital part of the region's future.

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[1]The material discussed in this article is abstracted from TVA's annual *Economic Outlook* (July 1983) which provides forecasts and analysis of economic conditions in the Tennessee Valley. Copies of the entire document can be obtained by writing Chief Economist Staff, Tennessee Valley Authority, 400 W. Summit Hill Drive, E4D100, Knoxville, Tennessee 37902.

[2]References to the Tennessee Valley and TVA region are used interchangeably to refer to the TVA power service area. This incorporates 170 counties in a seven-state area, including Tennessee, significant parts of northern Alabama, northern Mississippi, and southern Kentucky, and smaller parts of Georgia, North Carolina, and Virginia.

[3]The 1980-1982 recession saw output and employment in the TVA region contract far faster than in the U.S. as the recession progressed. The depth of the region's setback is largely explained by the preponderance of interest-sensitive industries in the region, plus the failure of fiscal stimulus from tax cuts and increased defense spending to help the region as much as the U.S. Several studies point to the high interest sensitivity of both the TVA region and other southeastern states. Calculations of the authors indicate that the Tennessee Valley may have received only about half the benefit of tax cuts and defense spending as the nation as a whole. A more complete discussion is available in the TVA *Outlook* cited above. Because the depth of the setback to manufacturing in this recession seems to be *cyclical* and not of concern to long-term developments, it is not discussed in detail in this article.

[4]J. Hekman and Alan Smith, "Behind the Sunbelt's Growth: Industrial Decentralization," *Economic Review* (March 1982), pp. 6-7.

[5]See note 3 above.

[6]For further discussion of electricity-seeking industry, see R. W. Gilmer, "Regional Electricity Costs and the Aluminum Industry," *Texas Business Review*, Vol. 57 (November/December 1983).

[7]The TVA region did have levels of personal income that converged steadily to U.S. levels. In 1959, personal income in the TVA region was 67.0 percent of the U.S. average; by 1979, it was 78.0 percent. Table 5 makes clear that rising wages played a modest role in covergence. A bigger labor force, rapid increases in labor force participation, and increased transfers into the region are the major reasons for rising relative personal income. An analysis of the factors that have made personal income grow in the Tennessee Valley is found in TVA's *Economic Outlook*.

[8]The price data available were from the Consumer Price Index for South versus non-South comparisons, family budget data relating to regional living costs, and price surveys conducted by the American Chamber of Commerce. They are not definitive concerning the Tennessee Valley, but they are consistent with living costs in the TVA region rising at much the same rate as the U.S. This stability is due to offsetting trends—housing prices rose sharply in the nonmetropolitan South throughout the 1970s relative to the U.S., but they were offset by the lower tax burden imposed by state and local governments.

[9]The strong competitive position of the U.S. is reiterated in William H. Branson, "Industrial Policy and U.S. International Trade," in M. L. Wachter and S. M. Wachter, *Toward a New U.S. Industrial Policy?* (Philadelphia, PA.: University of Pennsylvania, 1981), pp. 378-408; and Council of Economic Advisers, *Economic Report of the President* (Washington, D.C.: USGPO, 1983), pp. 52-66.

HUMAN LIFE VALUE CALCULATIONS: A COMPARISON OF THE *PENROD* AND *CULVER* DECISIONS

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INTRODUCTION

In September 1982, the United States Court of Appeals for the Fifth Circuit reversed itself on the admissibility of testimony by economists as to expected future inflation in cases involving injury or wrongful death. The 1982 *Culver v. Slater Boat Co. et al.* decision[1] (hereafter referred to as the *Culver* decision) overturned the court's 1975 ruling; this 1975 *Johnson v. Penrod Drilling Co.* decision[2] (hereafter referred to as the *Penrod* decision) had prohibited any consideration of inflationary factors in ascertaining damages for the loss of future wages. More recently, the United States Supreme Court in its *Jones & Laughlin Steel Corp. v. Pfeifer* decision[3] (hereafter referred to as the *Pfeifer* decision) addressed the issue of how projected inflation should be incorporated into calculations of damages for lost income, and, in general, the alternative approaches for including inflation permitted by *Culver* are also permissible under *Pfeifer*.

Under *Penrod* the economist was often placed in the position of applying questionable economic assumptions in order to conform to the legal precedent established by the *Penrod* decision. The result of the *Culver* and *Pfeifer* decisions will be to put the process of determining damages for wrongful death or injury on a firmer economic foundation. Hence, the focus of this article is on how the role of the economist is affected by the overturning of *Penrod*. The important general issue of ethics for the economist is examined, showing that the restrictions established by *Penrod* often created an ethical dilemma. An illustration is given of the damage estimates permitted under *Penrod*, and a description is presented of how the *Culver* and *Pfeifer* decisions permit a more rational and ethically defensible role for the economist.

THE ECONOMIC EXPERT

Economists, particularly in academic professions, frequently assume the role of experts in legal proceedings. One of the more common situations arises when an economist is requested to calculate human life value in cases involving wrongful death or injury.[4] The following case is assumed for the purpose of illustration: Mary's husband, John, was killed while working for John's employer, the XYZ Corporation. The resulting lawsuit, initiated by Mary (the plaintiff) against XYZ Corporation (the defendant) for negligently permitting work in an unsafe environment, has two elements. First, XYZ Corporation's negligence must be proved; however, the economist usually has no role in this first element of the case. The second element involves making an estimate of the economic damages; these damages involve the wages that John would have earned had he not been wrongfully killed.

Since the plaintiff's case must establish the dollar amount of damages, it is likely that an economist will be retained to perform the calculations. Often the defendant also will retain an economist either to present formal testimony on human life value or simply rebutt the plaintiff's economist, thus setting the stage for conflict between the two experts. However, the defendant's economist often assumes the role of an advisor to the attorney and thereby avoids the battle of formal testimony. In this advisory role, the expert may prepare cross-examination questions for the defendant's attorney, who then proceeds to make his points through cross-examination of the plaintiff's economist.

In defining the role of the economist in wrongful death cases, impartiality should be the key element. The conflict should be between economic points of view, not between experts presenting those points of view. For most academic economists, testimony as an expert witness is an opportunity to descend from the ivory tower in order to aid society in a practical situation. The "aid to society" in this situation is assigning an economically justifiable value to the lost wages of the decedent in such a manner that the decedent's estate is justly compensated and, similarly, that the negligent defendant pays the just amount. Of course, in addition to compensation for lost wages, the jury also may award punitive damages when the defendant is reckless or grossly negligent in causing the plaintiff's death. However, punitive damages normally are not in the domain of the economist's expertise.

The academic economist must remain impartial even though he is retained by an attorney whose ethical role is to obtain the best result for his client. The defendant's attorney will desire a low damage award, while the plaintiff's attorney will strive for a high reward; but the

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economist cannot be swayed by these biases. There are economists who have rationalized their biased roles by saying that they are plaintiffs' economists, not defendants' economists. These economists use assumptions which result in the highest possible damage awards and consequently find themselves in demand by plaintiff attorneys. Recall that while the plaintiff must prove damages, the defendant has no such burden of proof. This requirement of proof of damages by the plaintiff ensures a higher probability that the economist's role will be on the plaintiff side of the case. What better way for the economist to build a profitable consulting business than to do a "good" job for "his attorney." Being a plaintiff's economist in this sense is to cause a significant disservice to society. When the economist prostitutes himself in this way, a misallocation of resources often results in the form of an overpayment of the expected future wages to the plaintiff by the defendant.

The proper role of an expert economist is to be neither a plaintiff's economist nor a defendant's economist. The economist is *not* a lawyer trying to win an award for a client, and he receives no contingent fee based upon the outcome of the case. The proper role is to be an expert who is paid a predetermined fee for an impartial viewpoint. The economist is a resource for the jury and judge, and even though he is paid by one of the two sides, the calculations of lost wages should be identical whether the economist was retained by the plaintiff or the defendant.

Under *Penrod*, the battle lines between the two possible economic points of view, plaintiff and defendant, were rather well defined. Unfortunately, *Penrod* also caused an economic-legal dichotomy. As in many legal situations, case law set the parameters for the admissibility of evidence which prevented sound economic principles from being applied to the lost wages calculation.

INFLATION: THE VIEW OF THE COURT UNDER *PENROD*

On March 21, 1975, the United States Court of Appeals for the Fifth Circuit found that expected future inflation could not be considered in the calculation of lost wages in wrongful death cases. In addition, the court directed that income taxes on lost wages, income taxes on interest generated by the investment of the present value of the cash award, and contingent attorney fees (usually between one-third to one-half of the award) were to be withheld from the jury's consideration. The lost-wage calculation was to be based on the decedent's gross (not take-home) wages over his work life expectancy at an interest rate (discount rate) ". . . prevailing at the time and place of trial."[5] In short, the decedent's lost wages were the present value of his gross wages over his work life.

Information about gross wages at the time of death was usually supplied to the economist from the decedent's tax return or by his employer. The gross wages at the time of death were permitted to be increased over the work life by three factors: productivity, promotions, and merit. Perhaps it would be more correct to state that these three factors were not explicitly excluded from the economist's testimony since there were no requirements that they be considered, and in many cases they were not. Of course, inclusion of these items hinged on identifying good data sources. The Bureau of Labor Statistics publishes data on national productivity, but other than direct testimony in each case, there was usually no satisfactory data source for the decedent's expected merit increases or promotions. Moreover, even the national productivity data often were attacked on grounds of lack of specificity. Consequently, productivity adjustments had to be made giving careful consideration to such factors as national versus regional differences, occupational variances, age-education characteristics, etc. Finally, because of the paucity of data on merit and promotion trends, adjustments for these factors almost always were attacked as being speculative.

Under *Penrod*, to be on defensible footing for cross-examination, the economist often assumed that gross wages at the time of death would remain constant over the decedent's work life, an assumption that by ignoring the adjustments discussed above, flies in the face of common sense. By using constant gross wages and work life (easily obtainable from Bureau of Labor Statistics tables[6]), the economist's calculation became relatively straightforward. The other variable, the interest rate at the time and place of trial, was to be used to discount the stream of lost wages. The rate was to be a market rate, not a real rate, that is, an inflation-adjusted rate. Thus, while the court under *Penrod* had explicitly excluded expected future inflation from the decedent's wages, nevertheless it implicitly had kept expected future inflation in the discount rate by requiring a market rate. Consequently, future expected wages were too low since they excluded inflation and could not be adjusted for fear of reversible error being introduced on appeal; on the other hand, the discount rate was too high since it was a market rate which would include inflationary expectations. Hence, the economist's dilemma.

Economists were given some flexibility in their choice of the discount rate. With gross wages and work life defined, the present value of future expected wages over the decedent's work life became a function of the discount rate. A plaintiff's economist under pressure to produce a large damage award could utilize a low discount rate such as the passbook rate available at a local bank, but the defendant would argue for another interest rate such as the rate on long-term United States government bonds. Assume that the trial took place in early 1982 when the long-term rate on United States Treasury obligations averaged 14.50 percent and the bank passbook rate was 5.25 percent. Further assume that the decedent was 29 years of age at the time of his death and, consequently, could have been expected to remain in the work force for 30 more years.

Table 1 shows that by using the passbook rate, the estimate of damages would be $10,461 for each thousand dollars of the decedent's gross wages at the time of death; the defendant, however, could argue that the discount rate should be the average of long-term United States government bond rates with the resulting award totaling

only $4,744 per thousand dollars of gross wages. Thus, using the passbook rate results in an estimate of damages that is approximately 120.0 percent greater than the figure derived with the long-term bond rate. Both rates existed at the time and place of trial; nonetheless, the defendant might argue that the passbook rate was not a true "market" rate because of government-imposed interest rate ceilings on bank savings accounts. Also, the matter of whether a long- or a short-term rate is preferable is debatable.

Table 1
PENROD CASE:
PRESENT VALUE OF $1,000 OF GROSS WAGES AT DEATH WITH NO ADJUSTMENT FOR PROMOTION, MERIT, PRODUCTIVITY, OR INFLATION (WORK LIFE 30 YEARS*)

Discount Rate	Present Value Per $1,000 of Gross Wages
5.25 percent	$10,461
14.50 percent	4,744

*All calculations in this and the following tables deduct 30.0 percent of gross wages for consumption by the decedent.

Using the 14.50 percent bond rate has a strong economic rationale and meets the letter of the law. However, it would be economically inconsistent to use a 14.50 bond rate, which clearly contains an inflation premium, and then not adjust gross wages for inflation. If wages are not inflation-adjusted, then the discount rate should not be a market rate, but should instead be a real or inflation-adjusted rate. However, *Penrod* prohibited consideration of inflation in the estimate of future wages, and the use of a real interest rate was effectively excluded by the requirement to use a market rate of interest (discount rate) at the time and place of trial.

If the economic expert had been permitted either to adjust wages for inflation or to estimate and use a real interest rate, then the economist's role would have been less open to compromise. Unfortunately, the court's decision in *Penrod* was economically irrational and frequently put the economist in an untenable position no matter which discount rate he used. It is interesting to note that under these circumstances, utilization of the real interest rate, which was usually assumed to be between 1.0 and 3.0 percent, would have generated results nearer those produced using the passbook rate than by discounting by a market rate such as the long-term bond rate. Therefore, the role of the economist during the *Penrod* period became that of a selector and defender of a discount rate, an impossible selection to defend given the constraints of *Penrod*. The passbook rate offended the concept of a *market* interest rate; on the other hand, a market rate used with unadjusted gross wages could greatly understate the proper award to the plaintiff for economic damages.

THE *CULVER* CASE: A NEW OPINION ON THE TREATMENT OF INFLATION

As noted in the introduction, the United States Court of Appeals for the Fifth Circuit overruled its 1975 *Penrod* decision by permitting inclusion of inflation in calculations of the economic loss resulting from wrongful death. Moreover, the United States Supreme Court in its recent *Pfeifer* decision examined alternatives for incorporating inflation into damage estimates. The following discussion describes two specific methods of treating inflation considered in *Culver* and *Pfeifer* and presents a third "preferred" procedure which is consistent with the guidelines set forth by the two decisions.

The Alaska Rule

In *Beaulieu v. Elliot*[7] the Alaska Supreme Court recognized that inflation and interest rates are related and concluded that the discount rate and the rate of inflation are virtually identical. Hence, under the Alaska rule, economists were instructed to calculate lost wages using a summation of future years' estimated earnings and not use present value techniques: this procedure is referred to as the "total offset" rule in the *Pfeifer* decision.

The appropriateness of the Alaska rule obviously hinges on evidence pertaining to the relation between interest rates and the level of inflation. As to this matter, the long-term record clearly shows that interest rates typically exceed the inflation rate. (Of course, the relation between interest rates and inflation will vary somewhat according to the specific price index and interest rate selected.) In estimating damages in wrongful death cases, the court chose the Consumer Price Index (CPI) as the best available gauge of inflation.[8] Selection of the appropriate interest rate for discounting is more controversial, however, as was indicated in the previous section. Nonetheless, when the rate of inflation as measured by the CPI is compared over a long time period to a variety of interest rates in order to determine the historical inflation/interest rate relation, the results indicate that the average interest rate level tends to exceed the rate of inflation.[9] The few years when this relation was reversed occurred during periods of unexpectedly high inflation—such as some years during the 1970s—but lenders eventually anticipate inflation and raise their interest rates accordingly.

Thus, since rates of interest historically have tended to be higher than the rate of inflation, the *historical* real rate of return, which is the difference between the interest rate and the rate of inflation, has, on average, been positive.[10] It follows, then, that since the average level of real interest rates is positive, using the Alaska method (which in effect assumes a zero percent real interest (discount) rate) will result in the payment of excessive damages.[11]

Continuing the example begun in Table 1, application of the Alaska rule would result in an award of $21,000 for our 29-year-old decedent.[12] The $21,000 Alaska rule award is approximately double the award under *Penrod* if the 5.25 percent passbook rate is used and is over 4.4 times greater than under *Penrod* when the long-term government bond rate is applied.

It is interesting that the United States Supreme Court in its *Pfeifer* decision expressed considerable sympathy

with the "total offset" rule, primarily due to its simplicity of application. Also, in *Pfeifer* the court noted that there may be factors in addition to inflation, such as productivity growth, which act to "offset" the discount rate. Thus, while inflation does not normally offset the prevailing interest rate, the Court noted that inflation *plus* other forces (e.g., productivity growth) may come very near to doing so. However, the Supreme Court, feeling that it would be unwise to dictate a particular procedure to be used under a multitude of divergent circumstances, refused to establish the total offset rule as the only basis for determining all such damage awards.

We agree with the wisdom of the Court's refusal to select a particular procedure for dealing with inflation. For the particular example utilized in this article, the results of using the Alaska (total offset) method are considerably different from the results derived by using what we consider to be a preferred procedure for estimating damages. This preferred method is discussed after another technique for deriving damages, known as the *Feldman* approach, is presented.

The *Feldman* Approach[13]

The *Feldman* approach represents a compromise between the Alaska rule, which may be economically unfair to the defendant, and *Penrod's* procedure, which penalizes the plaintiff. Furthermore, the *Feldman* approach utilizes a more enlightened view of the relation between interest rates and the rate of inflation than that reflected by the Alaska rule. The *Feldman* approach specifically recognizes the concept of a real rate of interest, and the primary debate between economists focuses on the magnitude of the real rate.

While the Fifth Circuit in its *Culver* decision avoided a total endorsement of the *Feldman* approach, noting several weaknesses of the method, it did indicate that in a dynamic economy no perfect procedure is possible. The Court acknowledged that most experts would place the real rate of interest in a range of between 1.0 and 3.0 percent but left the calculation of a specific real rate to the economic expert.

The method to be used in determining the appropriate real rate was outlined by the Court as follows:

> First, find a time series of the effective annual interest rate on a relatively risk-free investment, e.g., a government bond.
>
> Second, match the time series above with Consumer Price Index (CPI) data, specifically, the annual percentage change in the Index.
>
> Third, subtract the CPI rate of change from the interest rate for each year, thus deriving historical annual real rates of return.
>
> Fourth, average the real rates of return in order to minimize unique or unusual events in atypical years.

The result is the average inflation-adjusted or "real" interest rate, which is to be used as the discount rate in the calculation of lost wages. The real interest rate will be used to discount the decedent's current wages, which should be adjusted for expected changes due to promotion, merit, and productivity, but not inflation, which was incorporated into the estimation process by using an inflation-adjusted discount rate.

The *Feldman* approach is used to estimate the present value of lost earnings for our hypothetical decedent in Table 2. In the table, discount rates of 1.0 and 3.0 percent are shown since these limits generally encompass most estimates of real interest rates which have been derived using the procedure described above. Both limits produce results which fall between the outcomes of the *Penrod* method (see Table 1) and the $21,000 amount obtained using the Alaska calculation.

Table 2
FELDMAN APPROACH:
PRESENT VALUE OF $1,000 OF GROSS WAGES
AT DEATH WITH NO ADJUSTMENT FOR
PROMOTION, MERIT, OR PRODUCTIVITY
(WORK LIFE 30 YEARS)

Discount Rate	Present Value Per $1,000 of Gross Wages
1.0 percent	$18,065
3.0 percent	$13,720

A PREFERRED METHOD

Neither the *Culver* nor the *Pfeifer* decisions dictate that a certain procedure be employed to incorporate the effects of inflation in calculations of damages for lost income. Both *Culver* and *Pfeifer* recognize that inflation should not be ignored, and both decisions also acknowledge that other factors such as promotion, expected merit, and productivity changes may also need to be considered. This section presents a "preferred" method of calculating damages that, while consistent with the guidelines laid down by *Culver* and *Pfeifer*, avoids some of the problems encountered with the approaches previously discussed in this article.

Under *Culver*, the major determinants of lost wages include the discount rate, the expected rate of inflation, and anticipated changes in merit, promotion, and productivity. With the *Feldman* approach, expected inflation is included via the real interest rate which is used to discount future wages adjusted for anticipated merit, promotion, and productivity changes. As previously noted, most experts would assign the real interest rate a value in the 1.0 to 3.0 percent range. However, the result of calculating an historical real rate is sensitive, among other things, to the particular interest rate series chosen and the number of years included in the calculations; consequently, considerable controversy exists regarding the real rate and how to estimate it.

If the preferred method is used, there is no need to "estimate" a discount rate since the expert can employ actual interest rates for riskless investment opportunities with maturities that match the decedent's work life expectancy. Consequently, the economic expert is able to

replace an *expected* real rate with the *actual* current rate of return. Thus, the advantage of not having to use an estimate of the controversial real interest rate constitutes a strong argument in favor of the preferred method.

One version of the preferred method adjusts wages at the time of death successively for expected inflation, merit, promotions, and productivity. In Table 3, the previous example is extended by first adjusting the hypothetical decedent's lost wages for expected inflation.[14] The adjustment for inflation was based on the 1961-1981 average annual increase in the Consumer Price Index (CPI), which amounted to 5.71 percent; the discounted present value of this income stream is $12,019, a figure lower than the present values obtained using either a 1.0 or a 3.0 percent discount rate (see Table 2). The second present value estimate listed in Table 3 includes an adjustment for productivity increases; for the 1961-1981 base period, productivity increases in the private business sector averaged 2.03 percent. The resulting discounted present value, including expected inflation and expected productivity increases, is $15,469. While merit and promotion are to be considered under *Culver*, there is no attempt to include them here since they are beyond the scope of this discussion, whose focus is primarily the controversy resulting from the *Penrod* and *Culver* decisions over the treatment of inflation.[15]

Hence, the estimated effect of inflation and productivity can be entered *separately* by utilizing historical evidence on each of these factors. However, an alternative, which is preferable, captures the impact of both these influences in a single measure. By using wage trends, the economist avoids having to make separate estimates of inflation and productivity and additionally captures factors such as demand-side forces that would not otherwise be included. Furthermore, wage data can be made more occupation- and location-specific than if inflation and productivity are estimated separately. Table 3 (see entries 3-7) includes several discounted present value estimates that utilize historical wage trends for the period 1961-1981, and all of these estimates are location- and/or occupation-specific.

CONCLUSION

The result of *Culver*, and more recently *Pfeifer*, is to rationalize economic calculations in wrongful death. The economist now has the opportunity to make his calculations based on sound economic principles. With this opportunity comes the realization that the opposing economist is free to challenge the estimates of damage unfettered by irrational legal constraints. *Penrod* with its lack of economic logic is gone, and in its place come added responsibility and a greater need for the economist to exercise sound judgment.

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[1] *Culver v. Slater Boat Co. et al.*, 688 F.2d 280 (5th Cir. 1982).
[2] *Johnson v. Penrod Drilling Co.*, 510 F.2d 234 (5th Cir. 1975).

Table 3
THE PREFERRED METHOD:
PRESENT VALUE OF EACH $1,000 OF GROSS WAGES AT DEATH—
NO ADJUSTMENT FOR PROMOTION OR MERIT, WORK LIFE 30 YEARS
(Discount Rate = 10.0 Percent)

Adjustment	Basis for the Adjustment	Magnitude of the Adjustment (Average Annual Rates of Change for 1961-1981) (%)	Resulting Present Value
1. Inflation	Consumer Price Index	5.71	$12,019
2. Inflation	Consumer Price Index (CPI)	5.71	
Productivity	Output per hour in the private business section	2.03	$15,469
3. Wages	Average weekly earnings in manufacturing (U.S.)	6.37	$13,017
4. Wages	Average weekly earnings in manufacturing (California)	5.86	$12,237
5. Wages	Average weekly earnings in manufacturing (Mississippi)	6.92	$13,934
6. Wages	Average weekly earnings in manufacturing, fabricated metals, and machinery (Jackson, MS)	8.13	$16,277
7. Wages	Average weekly earnings in manufacturing of plumbing and heating (except electrical) equipment (California)	5.14	$11,240

Sources: U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings, States and Areas, 1939-78, Bulletin 1370-13* (1979); *Supplement to Employment and Earnings, States and Areas, Data for 1977-81*, Bulletin 1370-16 (December 1982); *Monthly Labor Review* (various issues) (Washington, D.C.: U.S. Government Printing Office).

[5]*Jones & Laughlin Steel Corp. v. Pfeifer*, 76 L.Ed.2d 768 (U.S. S. Ct. 1983).

[6]Although there are differences in the treatment of some variables used in death as compared to injury cases, these differences are outside the scope of this article, and while much of the methodology that follows is applicable to injury situations, the focus of this analysis is on wrongful death cases.

[7]*Johnson v. Penrod Drilling Co.*, 510 F.2d 280 (5th Cir. 1975).

[8]Howard N. Fullerton, Jr. and James J. Burne, "Length of Working Life for Men and Women, 1970," *Monthly Labor Review*, Vol. 99, No. 2 (February 1976), pp. 31-35.

[9]*Beaulieu v. Elliot*, 434 P.2d 665 (Alaska 1967).

[10]In some cases, it may be possible to use a CPI which is specific to a certain location; however, location-specific CPI data are frequently not available.

[11]For the twenty-year period of 1961-1981, the inflation rate (as measured by the CPI) was compared to several rates of interest. For that period, the average annual increase in prices was 5.7 percent. Of the several series on interest rates observed, the lowest annual average was 6.2 percent for three-month Treasury securities, while the highest average was 7.9 percent for the prime rate.

[12]For a good treatment of real interest rates see G. J. Santoni and Courtenay C. Stone, "The Fed and the Real Rate of Interest," *Review of the Federal Reserve Bank of St. Louis*, Vol. 64, No. 10 (December 1982), pp. 8-18; also, see John H. Wood, "Interest Rates and Inflation: An Old and Unexplained Relationship," *Economic Review of the Federal Reserve Bank of Dallas* (January 1983), pp. 11-23. For the reader who wishes to go to the original source of much of the literature on real interest rates, see Irving Fisher, *The Theory of Interest* (New York: Macmillan Company, 1930), especially Chapter 19.

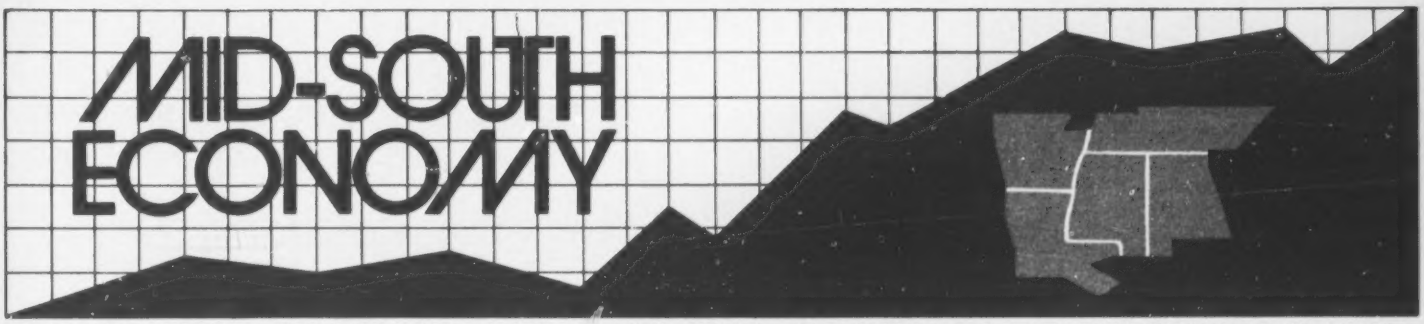
[13]The current (*ex ante*) real interest rate is the residual when the *expected* rate of inflation is subtracted from the nominal interest rate. However, the expected inflation rate must be estimated since it cannot be observed directly. Hence, measurement of the current real interest rate is subject to considerable uncertainty and is a source of controversy. The real interest rate used in estimation of wrongful death is an historical (*ex post*) statistic, and it is assumed, based on past behavior of the real rate, that a "normal" discount rate can be derived for use in estimating the economic loss due to wrongful death. For a discussion of the *ex ante/ex post* real interest rate dichotomy, see Santoni and Stone, "The Fed and the Real Rate of Interest"; Wood, "Interest Rates and Inflation: An Old and Unexplained Relationship"; and Fisher, *The Theory of Interest*.

[14]The $21,000 is obtained by multiplying the $1,000 of annual income by the remaining work life expectancy of 30 years. The resulting product, $30,000, must be reduced by 30.0 percent, which is the assumed level of the decedent's consumption.

[15]*Feldman v. Allegheny Airlines*, 524 F.2d 384 (2d Cir. 1975).

[16]The present value calculations in Table 3 all utilize a 10.0 percent discount rate. The previous assumptions regarding the decedent's age, work life expectancy, and consumption have been retained.

[17]We have introduced productivity since, in our opinion, the best way to include inflation is to use historical wage trends which involve a mixture of inflation, productivity, and other factors. Unless the wage trends are for the relevant age cohort, there would be a further need to estimate future wage changes due to merit and promotion. These factors can be accounted for by using age/earnings information and/or by introducing testimony specific to the decedent. For a discussion of some of these issues see Charles N. Dennis, William A. Sirmon, and Robert D. Drinkwater, "Wrongful Death Damages—Fair Compensation for Future Pecuniary Loss Requires Consideration of Economic Trends and Income Tax Consequences," *Mississippi Law Journal*, 47 (April 1976), pp. 173-209.



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STATISTICAL SUPPLEMENT

MID-SOUTH ECONOMY

On both the national and regional levels, indicators of economic activity during third quarter 1983 showed a much brighter picture than during third quarter 1982. Real Gross National Product rose at an annual rate of 8.7 percent in the second quarter of 1983 versus a modest 0.9 percent increase during second quarter 1982. The leading indicators rose 13.5 percent for the first nine months of 1983, providing evidence of continued recovery. While retail sales showed little improvement during the early summer, the level of adjusted sales in July 1983 was 10.3 percent higher than a year ago. Excluding the automotive group, retail sales advanced 6.2 percent over July 1982 sales. Employment and production gains reflected businesses' efforts to restock after unexpectedly strong demand last spring. Unemployment from June 1983 to July 1983 registered the largest month-to-month drop in almost 25 years, with industrial production rising 1.8 percent over the same period. Since the recovery began in November 1982, industrial production has risen 9.7 percent, with new orders for durable goods increasing in seven of the last nine months. In the coming months, in response to increased orders and sales, manufacturers will begin to rebuild inventories. This replenishing of depleted stocks should provide continued upward momentum to the economy.

For the Mid-South region, total personal income grew 5.9 percent from first quarter 1982 to first quarter 1983, slightly outpacing the national increase of 5.6 percent. Sales tax collections remained strong for Alabama, Arkansas, and Tennessee. Total employment increased approximately 60,000 in July 1983 from June 1983 and some 150,000 over July 1982. The value of total construction activity was up across-the-board, with total number of dwelling units substantially above the comparable period last year.

Census data analyzed by the Bureau of Census showed the five-state Mid-South region experiencing an in-migration of 667,111 persons between 1975 and 1980. Out-migration from the Mid-South region totaled 454,239 persons, with 47.7 percent leaving for the twelve-state North Central region. Surprisingly, 53.0 percent of the in-migration back to the Mid-South region came from the same North Central region. The net effect of both in- and out-migration for the five-year period was an increase of 212,872 persons with 65.0 percent coming from the North Central region, 32.7 percent coming from the nine-state Northeast region, and only 2.3 percent coming from the thirteen-state West region.

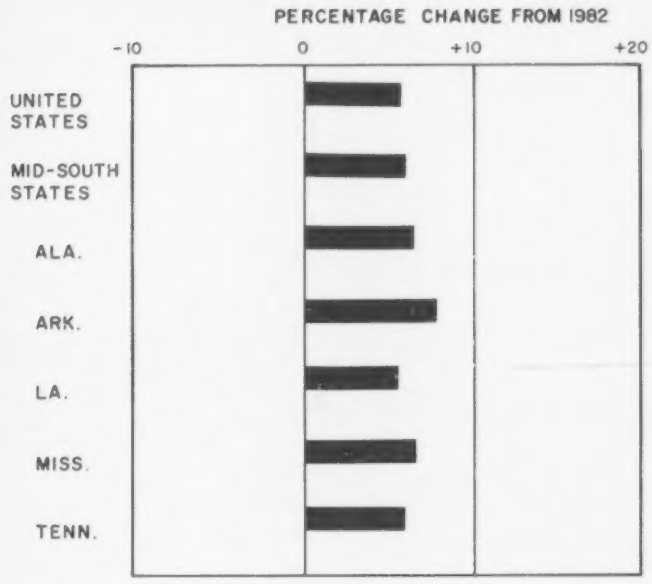
Finally, recent projections by the Census Bureau indicate that the population of the Mid-South region by the year 2000 is expected to grow 18.7 percent over the 1980 level, from 17,492,000 to 20,769,000.

Labor

Since the high rates of December 1982, the nation's jobless total has declined by approximately 1.4 million people, and the unemployment rate has dropped 1.3 percentage points to 9.5 percent for July 1983. During the same period, total employment increased by 2,192,000 persons. Productivity also showed an increase, with the index of output per hour in the non-farm sector rising 2.8 percent from second quarter 1982 to second quarter 1983. Three factors suggest more positive employment prospects in the future. First, the recovery is expected to increase employment at a rate of 2.5 percent over the next twelve months. Second, continued positive repercussions are expected from a more favorable tax policy; and third, moderate growth in the civilian labor force is expected.

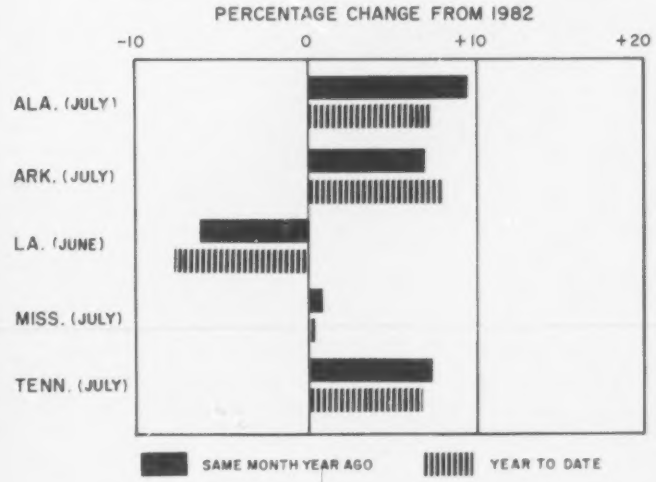
For the Mid-South region, the total number of persons unemployed increased to 932,200, only 0.1 percent above July 1982. The Mid-South civilian labor force declined 0.1 percent from last July, leaving the July 1983 aggregate unemployment rate of 11.8 percent at about the same level as a year ago. Mid-South non-farm employment declined by 81,300 jobs, or 1.3 percent, from a year ago. Manufacturing jobs declined by 16,500 persons from 1982, while non-manufacturing employment decreased by 64,800 persons, or 1.4 percent, below the July 1982 level. Arkansas registered a solid gain in non-farm employment since July 1982, primarily due to a 4.1 percent gain in manufacturing jobs. Louisiana experienced a 5.0 percent decline in manufacturing jobs from a year ago coupled with a slight drop in average weekly hours for production workers.

PERSONAL INCOME - I QTR. 1983

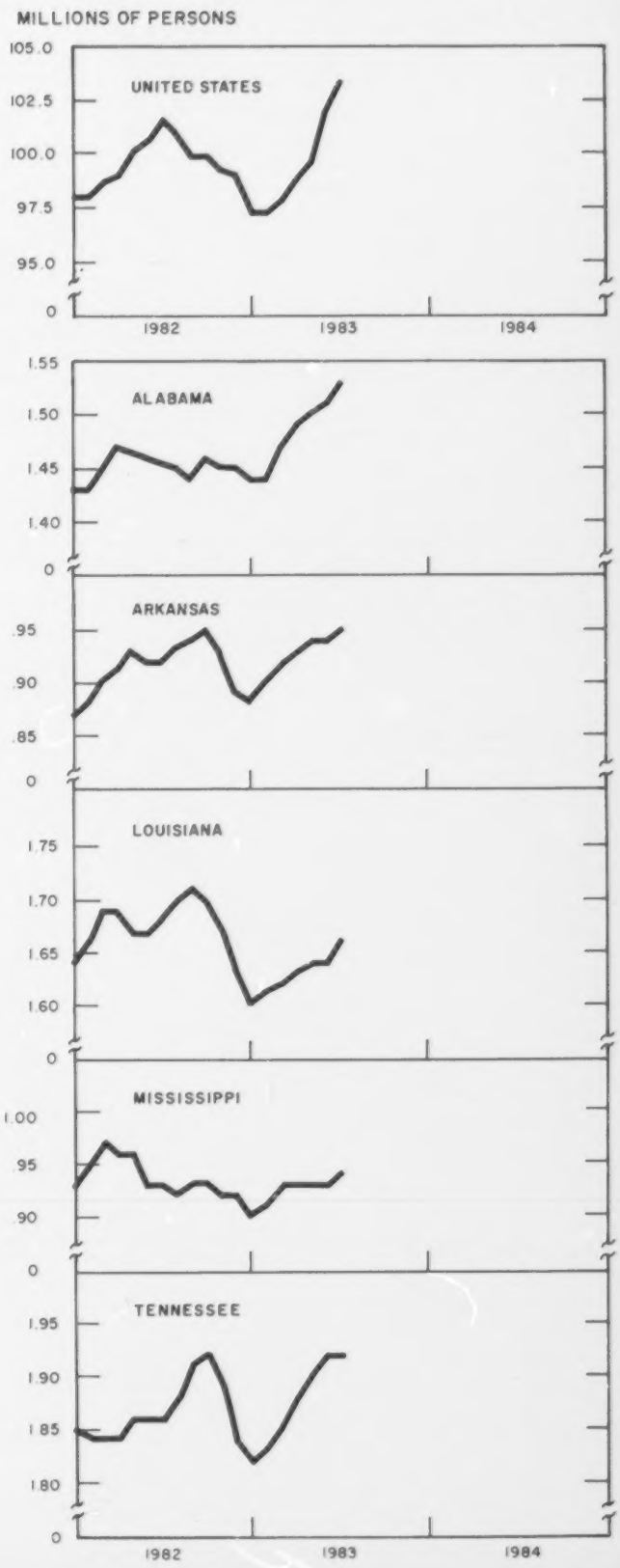


SOURCE: BUREAU ECONOMIC ANALYSIS

SALES TAX COLLECTIONS 1983



TOTAL EMPLOYMENT



Construction

For the twelve-month period ending June 1983, the dollar value of total building activity in the nation increased 18.6 percent compared to the same period in 1982. The dollar value of residential building activity led the way with a 57.3 percent increase, while non-residential activity declined 8.2 percent. Within the non-residential sector, industrial and office building construction fell 21.9 percent, school building dropped 4.0 percent, while hospital building increased 17.0 percent. However, new housing construction fell 0.6 percent in July 1983 from June 1983. A sharp increase in multi-family building offset an 11.9 percent drop in single-family units. This development has led many observers to speculate that the housing sector may be causing "a crack in the wall of recovery." With mortgage rates rising in both July and August, affordability has again become an obstacle to a sustainable recovery in the housing sector.

Most of the Mid-South states also experienced declines in office and industrial building, with hospitals and schools registering healthy gains. Louisiana and Tennessee were two Mid-South states that managed to register gains in non-residential construction activity.

Finance

Mortgage lending activity by Mid-South savings and loans experienced substantial gains over the levels a year ago, and net savings flow registered huge gains for the first half of 1983 versus the same period in 1982. According to the August 12, 1983, issue of the *American Banker*, the sixteen largest savings and loans in the Mid-South experienced a 33.8 percent increase in deposits for the year ending June 30, 1983, versus the same period in 1982.

Commercial banks in the Mid-South showed gains in total deposits of 16.1 percent from last July, outperforming the national increase of 11.2 percent. Growth in savings deposits across the Mid-South increased 155.6 percent from levels a year ago, again outperforming the nation.

LABOR 1983	United States (June)	Mid-South States Alabama (July)	Arkansas (July)	Louisiana (July)	Mississippi (July)	Tennessee (July)
Civilian Labor Force	113,383,000	1,754,700	1,014,600	1,892,400	1,076,800	2,157,300
Percent Change Year Ago	+ 1.6	+ 1.0	- 0.8	+ 1.7	+ 0.8	+ 0.5
Unemployed	11,570,000	228,300	92,900	233,900	144,000	233,100
Percent Change Year Ago	+ 6.3	-14.3	- 2.6	+18.1	+17.4	-10.5
Unemployment Rate						
1983	10.2	13.0	9.2	12.4	13.4	10.8
1982	9.8	15.3	9.3	10.6	11.5	12.1
Non-Agricultural Wage & Salary Employees	89,760,000*	1,319,300	720,900	1,583,500	783,000	1,671,400
Percent Change Year Ago	N.C.	+ 0.2	+ 1.4	- 1.5	- 0.6	- 0.6
Manufacturing Employment	18,560,000*	326,900	204,200	192,600	202,900	467,000
Percent Change Year Ago	- 1.9	- 1.6	+ 4.1	- 5.0	- 0.5	- 0.7
Non-Manufacturing Employment	71,200,000*	992,400	516,700	1,390,900	580,100	1,204,400
Percent Change Year Ago	+ 0.5	+ 0.9	+ 0.4	- 1.0	- 0.7	- 1.1
Average Weekly Earnings of Production Workers in Manufacturing	$355.04	$310.43	$290.48	$402.52	$266.26	$306.12
Percent Change Year Ago	+ 6.3	+10.2	+10.9	+ 4.3	+ 9.3	+10.5
Average Weekly Hours of Production Workers in Manufacturing	40.3	40.9	40.4	40.7	39.8	40.6
Percent Change Year Ago	+ 2.5	+ 5.4	+ 3.3	- 0.2	+ 3.9	+ 4.4
Average Hourly Earnings of Production Workers in Manufacturing	$ 8.81	$ 7.59	$ 7.19	$ 9.89	$ 6.69	$ 7.54
Percent Change Year Ago	+ 3.6	+ 4.6	+ 7.3	+ 4.5	+ 5.2	+ 5.9

*Seasonally adjusted.

Source: Departments of Employment Security and Survey of Current Business.

CONSTRUCTION[1] JUNE 1983	United States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Total Building						
Percent Change Year Ago	+18.6	+ 8.9	N.A.	+38.5	+18.6	+31.0
Residential Building						
Percent Change Year Ago	+57.3	+36.7	N.A.	+64.3	+66.7	+84.0
Non-Residential Building						
Percent Change Year Ago	- 8.2	- 7.5	N.A.	+23.1	-17.5	+ 2.1
Total Dwelling Units						
Percent Change Year Ago	+56.4	+34.8	N.A.	+67.8	+52.1	+65.6

[1] Twelve-month cumulative rate.

Source: Federal Reserve Bank of Atlanta from data supplied by the Bureau of Census.

FINANCE JULY 1983	United States	Mid-South States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Member Banks as of July 1983 Percent Change from July 1982							
Total Deposits	+ 11.2	+ 16.1	+ 10.5	+ 17.9	+ 10.6	+ 12.3	+ 11.8
Demand Deposits	+ 9.3	+ 7.1	+ 10.5	+ 3.4	- 1.1	+ 5.4	+ 4.5
Time Deposits	- 14.8	- 10.8	- 9.4	N.A.	- 5.3	- 11.2	- 11.7
Savings Deposits	+127.5	+155.6	+103.6	+ 22.0	+114.6	+229.2	+140.9

Source: The Federal Reserve Bank of St. Louis and the Federal Reserve Bank of Atlanta.

SAVINGS AND LOAN ACTIVITY 1983	Alabama (July)	Arkansas (June)	Louisiana (June)	Mississippi (June)	Tennessee[1] (July)
Mortgage Loans Made (millions)	$ 73.8	$187.1	$180.8	$ 32.9	$ 65.1
Percent Change Year Ago	+240.1	+219.3	+104.3	+311.3	+173.4
Percent Change Year-to-Date	+251.3	+390.8	+126.1	+236.4	+160.9
Net Savings Flow (millions)[2]	$ 32.5	+ 65.4	$160.6	$ 26.1	$ 19.5
Percent Change Year Ago	+301.9	+ 74.8	+ 93.7	- 24.6	+ 32.9
Percent Change Year-to-Date	+305.1	+1,126.2	+242.7	+100.8	+403.3

[1]Figures are for total loans made.

[2]Net savings flow equals new savings received plus dividends credited minus savings withdrawn.

Source: Federal Home Loan Banks of Little Rock, Cincinnati, and Atlanta.

TENNESSEE ECONOMY

Tennessee's economy continued to grow in the second quarter of 1983, primarily due to strong retail sales and construction activity. Retail sales rose 4.6 percent in the second quarter of 1983 versus second quarter 1982, with Memphis and Nashville registering gains of 8.3 and 7.6 percent, respectively. The dollar value of total building increased 31.0 percent for the twelve-month period ending June 1983 versus the corresponding twelve-month period in 1982. The dollar value of residential activity jumped 84.0 percent, with the number of dwelling units increasing 65.6 percent. Also, the Tennessee Department of Economic and Community Development reported $492.2 million in manufacturing investments during the first two quarters of 1983 compared to $309.1 million during the same period in 1982. In addition, non-manufacturing investments totaled $49.4 million, primarily in headquarters and distribution facilities. Tennessee's banks, savings and loans, and credit unions also experienced gains from last July, with savings deposits up 140.9, 142.0, and 23.0 percent, respectively. NOW accounts jumped 102.1 percent, share drafts increased 73.0 percent, and total deposits at commercial banks climbed 11.4 percent.

Problem areas for the Tennessee economy are in the employment and agriculture sectors. The mid-July index of prices received by Tennessee farmers for all farm products stood at 128.0 percent of the 1977 average, a decline of one index point from a year ago. The index for crops rose six index points, while the index for livestock dropped eight index points below the July 1982 level.

For Tennessee, the total number of persons unemployed dropped 10.5 percent from last July, causing the unadjusted employment rate to fall to 10.8 percent. Also, initial claims for unemployment benefits totaled 55,105 for July 1983 which was 33.9 percent below last July. However, while Tennessee's manufacturing employment in second quarter 1983 registered a modest gain of 0.8 percent from first quarter 1983, it was still 2.2 percent below second quarter 1982. Non-manufacturing employment was 1.9 percent below last year's second quarter figure. All the major metropolitan areas in the state remained well below their second quarter 1982 levels in manufacturing employment, with Chattanooga and the Tri-Cities the only two metropolitan areas registering gains from the second quarter of last year in non-manufacturing employment. Two positive signs emerging are the continued slower growth in the civilian labor force and the gains made in the number of weekly hours for production workers. Additionally, increases in hourly pay for production workers has generally outperformed the nation during the last three report periods.

Recent energy data released by the Energy Division of the Tennessee Department of Economic and Community Development indicated on a year-to-date basis that Tennessee coal production declined 15.5 percent, crude oil production increased 14.4 percent, and natural gas production increased 64.9 percent from the comparable 1982 period. In addition, consumption of gasoline for the first five months of 1983 declined 1.6 percent from the comparable period in 1982.

Finally, a recent analysis by the Bureau of Census indicated that from 1975 to 1980, 118,008 persons left Tennessee while 197,276 in-migrated. Of the net migration of 79,268 persons, 68.0 percent came from the North Central region, 30.0 percent came from the Northeast region, and 2.0 percent came from the West region.

THE EFFECT OF DISC ON SMALL EXPORTERS IN MANUFACTURING INDUSTRIES

*Clyde Posey and Joseph Szendi**

DISC (Domestic International Sales Corporation) legislation was enacted under the Revenue Act of 1971 as a tax incentive to stimulate exports by United States manufacturers.[1] DISC was designed to do the following:

1. Stimulate export sales of goods manufactured in the United states and improve the balance of payments deficit.
2. Offset the tax advantages enjoyed by American firms which manufactured goods abroad through foreign subsidiaries.
3. Offset the tax advantages provided by governments of foreign competitors to their domestic producers to stimulate their exports.[2]

It is necessary to mention that some foreign producers enjoyed certain advantages under the GATT Agreement (General Agreement on Trade and Tariffs). DISC legislation was designed to counteract some of them. Most European countries impose a value-added tax which is, in most cases, entirely refunded to an exporter. This has been permitted under GATT which restricts the types of export subsidies and import restrictions a country can invoke.[3] GATT was entered into for the purpose of reducing governmental barriers to international trade and has had the effect of limiting the way in which nations may legitimately subsidize their exports. Direct subsidies and rebates of direct taxes are prohibited; but indirect taxes, such as value-added tax, may be rebated if applied on a destination basis. The effect of this was to allow a nation imposing a value-added tax to give exporters a rebate of a substantial portion of the total tax that would otherwise have been imposed on their products.[4]

The effect of GATT was to place United States exporters in the position of having to bear the entire share of United States taxes, while foreign firms subject to value-added tax did not have the burden of one of their primary taxes. To avoid violating GATT restrictions, DISC was structured to provide tax deferral for exporters instead of a direct rebate on export goods.

The DISC Corporation

The requirements of a DISC are deceptively simple considering that DISC legislation is one of the longest and most complex of the international tax provisions.[5] Section 992(a)(1) of the Internal Revenue Code specifies the requirements as:

1. At least 95.0 percent of gross receipts must be derived from "qualified export receipts."
2. At least 95.0 percent of the adjustd basis of all assets of the corporation at the close of the taxable year must be invested in "qualified export assets."
3. The corporation must be incorporated in the United States and may have only one class of stock, and the par or stated value of the outstanding stock must be at least $2,500 on each day of the taxable year.
4. The corporation must make an election to be treated as a DISC, and such elections are in effect for the taxable year.

Of these requirements, only the qualified asset test provides problems. Qualified export assets consist of export property—property manufactured, produced, grown, or extracted in the United States by any person or persons other than a DISC—which is held primarily for the sale, lease, or rental in the ordinary course of trade or business for direct use, consumption, or disposition outside the United States, and not more than 50.0 percent of the fair maket value of which is attributable to articles imported into the United States.[6] These qualified export assets include any inventory of export propety itself, all related assets including working capital, and producers' loans, which are loans by a DISC either to its related manufacturer or to any other United States export manufacturer.

Taxation of DISC Income

The DISC corporation does not pay tax on its income. Instead, the shareholders are subject to taxation on the earnings and profits of the DISC. Shareholders are taxed 50.0 percent of the DISC's income from export sales regardless of whether the income is distributed to the shareholders or is retained by the DISC. The tax on the remaining 50.0 percent of the DISC's export income is deferred and is made virtually indefinite if the DISC complies with the statutory provisions for use of the funds it retains.

The method of allocation of income between a DISC and its parent is an important part of the DISC statute. Companies will find it advantageous to put as much of their income as possible into a DISC because of the long-

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term deferral for most of the DISC's profits. Profits of the DISC may be determined by three methods:

1. Four percent of the qualified export receipts on the sale of such property by the DISC plus 10.0 percent of the export promotion expenses attributable to these sales.
2. Fifty percent of the combined taxable income of the DISC and its parent company on the sale of qualified export assets plus 10.0 percent of the export promotion expenses attributable to these sales.
3. The taxable income obtained from the sale price actually charged by the DISC subject to the rules provided in Section 482 of the IRC.[7]

Companies will generally find the first two methods most advantageous. In the case of low-profit margin goods, the 4.0 percent rule will be preferable if the pre-tax profit ratio to sales is less than 8.0 percent, while the 50.0 percent rule will favor high-profit margin goods with pre-tax profit to sales ratios greater than 8.0 percent.[8]

Evaluation of DISC

Since its enactment in 1971, a number of studies have been performed on DISC to determine its impact on increasing United States exports. The first report to Congress submitted by the Treasury Department for the tax year ending March 31, 1973, indicated 2,249 DISC tax returns were filed. This figure increased to over 12,200 DISC tax returns for the year ending March 31, 1980. This dramatic increase provides evidence that there are some benefits to firms using DISC. Other studies in later years confirmed some increase in exports but were inconclusive as to how much was attributable to the DISC program. The procedure used by the four major studies assumed that all tax savings from DISC were used to lower export prices; however, this asumption was not addressed specifically.[9]

A number of questions remain unanswered about the effectiveness of DISC in stimulating exports. Do its benefits pertain to large or small firms? Does DISC have an effect on lowering prices of exports? Is it used as a tax shelter? These are some of the questions which this article seeks to address.

Measuring Executive Opinions at Small Manufacturers in DISC Election

The objective of this article is to cast light on the effectiveness of DISC as a stimulus for increasing United States exports by small manufacturers. Since the term "small" is arbitrary and vague, for this study it was decided that firms with sales between $50 million and $100 million would be the focus. One hundred firms were selected from Standard and Poor's listing of corporations. Ten firms with annual sales in the dollar range stated above were selected from the following ten industry segments: electronic computing equipment, pharmaceutical preparations, machine tools, semiconductors, ball and roller bearings, measuring instruments, cement, oil field equipment, pumps and pump parts, and nitrogenous and phosphate fertilizers. Questionnaires were sent to these firms as though it was not known if they were involved in an export business. Of the 100 questionnaires sent out, 29.0 percent were returned; a number of these had comments supplied in addition to the answers to the questions posed.

Survey Findings

It was not known initially which firms had DISC, and the first question addressed this issue.

Table 1 provides the responses to the question, "Does your company or any of your subsidiaries currently operate under DISC tax status?"

Table 1
COMPANIES CURRENTLY OPERATING UNDER DISC STATUS

Response	Number of Responses	Percent of Total
Yes	32	62 %
No	20	38
Totals	52	100%

Of the 52 respondents, all provided an answer to this question, with 62.0 percent responding positively and 38.0 percent indicating they did not operate under DISC status.

The next four questions on the questionnaire concerned only those firms which responded "yes" to question number one.

Table 2 provides responses to the statement, "DISC has been a positive factor in increasing your firm's exports."

Table 2
DISC HAS BEEN A POSITIVE FACTOR IN INCREASING FIRMS' EXPORTS

Response	Number of Responses	Percent of Total
Strongly Agree	2	6 %
Agree	12	39
Indifferent	11	36
Disagree	5	16
Strongly Disgree	1	3
No Opinion	0	
Totals	31	100 %

Of the 32 firms which indicated use of DISC, 31 replied and 1 left the question blank. It is interesting to note that almost half the respondents indicated "indifferent" on the effect of DISC as a positive factor in increasing the firms' exports. However, 39.0 percent felt that DISC had been a positive factor, with only two firms strongly agreeing. Surprisingly, five firms (representing 16.0 percent) disagreed.

Two respondents using DISC who felt DISC did not help in increasing their exports commented on this question. A manufacturer of electrical automotive parts stated, "If the price of the product without considering the DISC is not profitable and competitive, the DISC is not going to help." The other commentary by a manufacturer of hydraulic pumps indicated, "Our philosophy does not

seem to be influenced by DISC rules. We operate normally and then use the DISC to benefit what we've done." These comments indicate that some users did not feel DISC influences their export decisions. Rather, they use other criteria. Interestingly, both of these firms indicated use of DISC primarily as a tax shelter, suggesting that if a firm exports, DISC can provide some benefit to it.

Table 3 indicates the responses to the question, "Are the benefits of DISC greater for your firm than the costs?"

Table 3
DISC BENEFITS ARE GREATER THAN THE COSTS

Response	Number of Responses	Percent of Total
Strongly Agree	18	56 %
Agree	11	35
Indifferent	2	6
Disagree	1	3
Strongly Disgree	0	
No Opinion	0	
Totals	32	100 %

All 32 firms using DISC responded to this question. Fifty-six percent strongly agreed that the benefits outweigh the costs in the use of DISC. Another 35.0 percent agreed less strongly, and only two firms (representing 6.0 percent of the respondents) marked indifferent to this question. The opinions expressed in this question, with an overwhelming 91.0 percent seeing benefits to using DISC, may explain the increase in the number of DISC tax returns in 1980 having grown more than fivefold since 1973.

Most who agreed that the benefits outweigh the costs also stated that DISC could be improved to increase the benefits. Two electronics firms and two machine-food firms listed "simplification of compliance and calculation" as areas that should be changed to make DISC more beneficial, especially for smaller firms.

Table 4 addresses the question of what size firms benefit more from the use of DISC. Six of the firms did not respond to this question, while five marked more than one choice. Fifty-three percent felt that large multinationals obtained more benefits. This could be associated with the well-established markets and foreign operations many multinationals have through which they can rely on greater opportunities for export sales. Eighteen percent indicated more benefits from DISC accrue to medium-sized firms, while only 13.0 percent felt small firms reaped more benefits from DISC.

Table 4
SIZE OF FIRMS RECEIVING THE GREATER BENEFITS FROM THE USE OF DISC

Response	Number of Responses	Percent of Total
Large Multinationals	20	53 %
Medium-Sized Firms	7	18
Small Firms	5	13
No Response	6	16
Totals	38	100 %

The final question in this section of the questionnaire addressed the nature of the use of DISC by the responding firms. Of the 32 respondents, 3 marked both choices provided, resulting in more responses than questionnaires. Seventy-seven percent indicated they use DISC primarily as a tax shelter, while 23.0 percent of the respondents indicated use of DISC to increase competitiveness with foreign manufacturers. Of this latter group, three firms (representing 8.0 percent of the responses) also use DISC as a tax shelter, which increased the tax shelter use to 85.0 percent.

Table 5
USE OF DISC PRIMARILY FOR TAX SHELTER OR TO INCREASE COMPETITIVENESS WITH FOREIGN MANUFACTURERS

Response	Number of Responses	Percent of Total
Increase Competitiveness	8	23 %
As a Tax Shelter	27	77
Totals	35	100 %

Although the intent of DISC is to stimulate exports of Unites States goods, it would appear that most who can use DISC use it to shelter a portion of earnings from taxes.

The second part of the questionnaire dealt with firms who answered "no" to question number one, addressing the use of DISC.

Table 6 provides the responses to the question, "Is your firm aware of the benefits of DISC for small exporters?"

Table 6
AWARENESS OF DISC BENEFITS BY FIRMS NOT USING DISC

Response	Number of Responses	Percent of Total
Yes	15	75 %
No	5	25
Totals	20	100 %

Of the 20 firms who indicated they did not operate under DISC status, 75.0 percent stated they were aware of DISC, while 25.0 percent stated they were not aware of DISC benefits.

Table 7 addresses plans for the consideration of use of DISC by those firms surveyed who are not using DISC. A surprising 90.0 percent indicated they are not considering use of DISC in the future. Only two firms, representing 10.0 percent of the respondents, indicated consideration of future use of DISC.

Table 7
CONSIDERATION OF DISC FOR FUTURE USE BY FIRMS NOT PRESENTLY USING DISC

Response	Number of Responses	Percent of Total
Yes	2	10 %
No	18	90
Totals	20	100 %

Interpretations and Conclusions

Previous studies of DISC "assumed" that DISC provided an incentive for increasing export sales by giving United

States producers pricing benefits. However, prior studies indicated that prices were affected only minimally. Another point was that DISC was primarily a tax shelter for large multinationals. While export prices were not significantly affected by DISC, research provided no support for the position that DISC did not aid exports in other ways.

This study focused on small manufacturers in various industries and attempted to find out how extensively they use DISC and if, in fact, DISC has been a positive factor in increasing their exports. About one-half the firms responding in this survey felt DISC contributed to their exports. Also, the overwhelming majority indicated that benefits of using DISC are greater than costs. The firms in this category represented industry segments. Of eight of the ten industries used in the survey, only cement and fertilizer manufacturers did not respond positively to DISC.

The concept of DISC being more advantageous to multinationals is not dispelled by the responses addressing that area. More than half felt that multinationals benefited most, while less than one-fourth indicated medium-sized or small firms also benefited. It is interesting to note that one of the respondents commented on his firm using DISC to compete with foreign producers as an incentive to decrease price because of a strong dollar compared to other currencies.

Changes in DISC

Of the 32 firms who indicated use of DISC, only 4 did not provide comments on what changes would improve DISC. Numerous areas were identified, and the major ones will be presented.

Two firms in the electronics industry commented on the need for DISC with the current strong U.S. dollar in relation to other currencies. "In view of the current strong dollar, DISC is needed to help us meet pricing problems." This statement indicates that DISC can indirectly help increase competitiveness in the exchange rate differential.

Three firms representing oil field equipment, machine tools, and electronics suggested "elimination of the base period adjustment" as a change to help stimulate DISC sales.

Four firms commented on increasing tax benefits to improve DISC's ability to stimulate exports. Oil field equipment, pharmaceuticals, measuring instruments, and machine tool firms were represented in this group. "Permanent deferral of U.S. export profits" and "permanent deferral after some specified period of time—say ten years," are representative statements of respondents addressing that issue.

One further area was singled out as having a negative impact on DISC. A manufacturer of roller bearings and one of electronic computing equipment concerns suggested that Congress should support DISC. One respondent stated, "Less congressional noise would help in providing assurance that DISC will not be suddenly eliminated." To reinforce this statement the respondent producing bearings included a nine-page proposal to replace DISC issued by the Office of the U.S. Trade Representative. One oil field equipment respondent adequately summarized this point with the following statement, "In recent years, there's been a lot of talk and legislation on eliminating DISC from Congress since it's only a tax shelter and from the administration in response to GATT. This makes it very hard to invest a lot of time or money in a DISC since it may be legislated out of existence." Changes in these and other areas would have a positive impact on DISC.

Drawbacks to DISC

Drawbacks to DISC is another area where numerous opinions were expressed. These comments tended to be in the same vein as the previous comments in that these drawbacks are specific problem areas pointed out by various firms. There is an unstated implication that if these areas were changed, the impact would be beneficial to domestic exporters.

Eighteen of the "yes" questionnaires had substantive comments on this subject, with the most popular being bookkeeping requirements and paperwork. Eight questionnaires specifically identified this point as the single drawback in the use of DISC.

The next most popular issue suggested as being a drawback to DISC concerned qualified receipts and assets. One firm in the oil field equipment industry responded that "certain restrictions on a DISC's assets are a major drawback," while another firm in the same industry stated: "It is difficult to invest the profit in foreign assets." This firm implied that it tries to reinvest the DISC profit but has problems meeting the requirements for "foreign" assets.

Three respondents provided very detailed comments on the drawbacks of DISC which are especially worthwhile. One commented on the incremental ruling of DISC having a negative effect, and two commented on the IRS' position on DISC. A technology firm stated: "Incremental ruling has virtually erased our benefit. Last year, because of it, our commission was $253K; our dividend was $170K. Tax savings for the year were only $38K." The point on the drawback of the incremental ruling is well shown by this respondent.

The IRS has a detrimental effect on DISC commented an electronic components manufacturer who stated: "Complexity of rules makes audit (IRS) adjustment a *certainty*, therefore, will probably impact effective tax rate in year of audit."

The final comments, and possibly the strongest, exposing disadvantages of DISC use came from a manufacturer of pipeline equipment. This respondent stated: "The main drawback is an IRS audit by personnel who are said to be specialists. Most of them, although not all, have hallucinations of abuse of the system. This type of audit is extremely costly to both the government and the taxpayer."

In terms of overall importance, it seems that DISC is considered as a stimulus for exports by small United States manufacturers, although not necessarily affecting prices materially. The fact that a substantial portion use DISC and comment favorably on its benefits indicates that

the DISC program is achieveing the goal of improving competitiveness of United States exports, but the strong negative comments about its disadvantages indicate that DISC legislation should be amended with the aim of making it a more simplified and profitable tax vehicle for U.S. manufacturers in order to stimulate U.S exports, thereby achieving the original objectives of DISC.

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[1]Samuel Rabino, "An Attitudinal Evaluation of An Export Incentive Program: The Case of DISC," *Columbia Journal of World Business* (Spring 1980), p. 61.

[2]*Ibid.*

[3]Emory S. Naylor, Jr., and Richard A. Hanson, "Some Observations Concerning the Operation of a DISC," *Taxes—The Tax Magazine* (December 1972), p. 783.

[4]*Ibid.*

[5]Robert Feinschreiber, "DISC: A New Export Tax Incentive," *Financial Executive* (April 1972), p. 66.

[6]Internal Revenue Code of 1954, Section 993(c)(1).

[7]Internal Revenue Code of 1954, Section 994(a).

[8]Rabino, "An Attitudinal Evaluation of An Export Incentive Program," p. 63.

REFERENCES

1. Bevans, Charles I. *Treaties and Other International Agreements of the United States of America 1876 to 1949* (7 Volumes). Washington: Government Printing Office, 1970.
2. Dent, Frederick B. *Columbia Journal of World Business*, Fall 1973, 8, pp. 26-29.
3. Eberle, William D. "Negotiating A New World Marketplace—An Overview," *Columbia Journal of World Business*, Fall 1973, 8, pp. 30-33.
4. Feinschreiber, Robert. "DISC: A New Export Tax Incentive," *Financial Executive*, April 1972, pp. 66-70.
5. Hearing Before the Committee on Small Business. *Tax Incentives and Small Business Exports*. Washington: Government Printing Office, 1982.
6. *Internal Revenue Code of 1954*. Washington: Government Printing Office, 1982.
7. Naylor, Emory S., Jr., and Richard A. Hanson. "Some Observations Concerning the Operations of a DISC," *Taxes—The Tax Magazine*, December 1972, pp. 783-792.
8. Price Waterhouse. *Economic Impacts of the Domestic International Sales Corporations Tax Provisions*. Washington: Price Waterhouse, 1982.
9. Rabino, Samuel. "An Attitudinal Evaluation of An Export Incentive Program: The Case of DISC," *Columbia Journal of World Business*, Spring 1980, 15, pp. 61-65.
10. Tinnin, David B. "Trying to Restart the Engine," *Fortune*, November 29, 1982, pp. 52-55.

AN ASSESSMENT OF THE ROLE OF THE SPONSOR-PROTÉGÉ COALITION AS A VEHICLE FOR UPWARD MOBILITY

*Tilton L. Willcox**

INTRODUCTION

Personal assistance in executive upward mobility can come from a number of sources acting in a guiding or advisory capacity—peers, supervisors, guides, protectors, benefactors, sponsors, advocates, and mentors. Shapiro, Haseltine, and Rowe,[1] in their article, "Moving Up: Role Models, Mentors, and the 'Patron System,' " suggest that there is a continuum of those who function in advisory/support roles as they facilitate entry and mobility for their protégés. At one end of the continuum there is the relationship between peers helping each other to succeed and prosper. The term "peer pals" has been coined to describe this relationship. At the other end of the continuum is the relationship between high-level mentors and their protégés. At the two-thirds point on the continuum there are the sponsors who serve more as strong but less powerful patrons than mentors in providing the visibility, access to information, and coaching needed to keep their protégés upwardly mobile. At the one-third point on the continuum are the "guides" whose primary function is to point out the perils and shortcuts.

The purpose of this article is to examine the relationship at the two-thirds point that can exist between sponsors and protégés who have formed "coalitions" or "push-pull" teams to enhance their individual climb up the organizational hierarchy. The coalitions, which will be called sponsor-protégé coalitions, can be defined as longstanding combinations of an upwardly mobile boss (sponsor) and a certain subordinate (protégé), who have resolved or suppressed any personal differences and now function as a mutually-supporting, close-knit team in the competition for promotion. The alliance tends to move laterally or upward in the organization as a single entity for the duration of the personal coalition.

The relationship between the boss and certain subordinates in the sponsor-protégé coalition tends to be one of mutual benefit. The protégé may complement his superior by being strong in an area where his superior is weak. He may serve in the role of technical advisor, confidant, detail man, etc. Those in the coalition compete for promotion as a team, with the subordinate helping to push the boss up in the organizational structure. When the sponsor rises, the protégé moves with him and, in essence, is pulled up in the hierarchy. Such coalitions or alliances or push-pull teams can be very efficient; however, like high-level mentorship, they may also foster organizational conflicts and executive anxiety.

James Clawsen[2] summarized his study of this type of developmental superior-subordinate relationship by stating that the essential characteristics of the relationships are: a high degree of role complementarity; a high level of mutual respect and trust, developed by consistency in behavior; an informal relationship; openness with information; and a high level of interaction frequency.

The following real-life example illustrates how one sponsor-protégé coalition climbed rapidly in the military hierarchy. First Lieutenant X (navigator) joined the SAC B-36 commanded by Captain Y (pilot) in the early 1950s. Lt. X was an outstanding navigator and mission planner; Captain Y was a good pilot and an excellent organizational politician. Their performance in the air and at the officers' club bar earned them an early promotion to the next respective ranks. When Captain X and Major Y were assigned to a new B-47 bomber wing, they managed to stay together as the nucleus of a three-man B-47 crew while most crews were being formed by pilots, navigators, and co-pilots who had not flown together before. While other crews were still learning to work together, they passed the rigorous evaluation for combat ready status and were the first crew in the wing to obtain Select Crew status and spot promotions to the next respective ranks. Major X and Lt. Colonel Y were selected as the wing's chief standardization crew, and their spot promotions were soon made permanent below the zone promotions. Major X's superior navigational ability kept the crew visible, and Lt. Colonel Y's political acumen helped the crew obtain the maximum career mileage from their good performance in the air. Lt. Colonel Y had received a constant superior performance evaluation report for his crew's performance, and he, in turn, gave his navigator a steady stream of superior ratings. Major X was the first man in his West Point class to become a major.

The sponsor-protégé coalition of Major X and Lt. Colonel Y continued for another seven years as they progressed together up the Strategic Air Command's hierarchy as squadron commander and squadron navigator, as wing director of operations and wing training officer, as wing commander and chief of bombing and navigation, and as division commander (brigadier general) and base

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commander (colonel), respectively. Officer X was instrumental in providing the planning and ideas that helped push Officer Y to brigadier general. Offier Y's steady stream of superior performance evaluations for his protégé and his ability to offer more and more responsible jobs to his "navigator" enabled Officer X to reach the rank of full colonel far ahead of most of his military academy classmates who had been required to establish workable superior-subordinate relationships with many bosses as they advanced. Other examples of the use of sponsor-subordinate coalitions for upward mobility might include John F. Kennedy and Robert F. Kennedy, Robert S. McNamara and his "whiz kids," and General Douglas MacArthur and his protégé planner in Washington and the Phillipines—Lt. Colonel Dwight D. Eisenhower.

In recent years there have been numerous studies of the mentor-protégé relationship. Roche[3] and Willcox[4] documented the importance of this relationship by surveying the importance placed on the mentoring process by high-level executives. Farris and Ragan investigated the mentor-protégé connection and its impact on female executives.[5] Mentorship is an important and prevalent phenomenon in large American organizations. The mentor-protégé relationship can contribute significantly to management development programs. A few great mentors or "godfathers" in each field develop the top contributors for the next generation, passing on the lamp of learning as the short edge of professional competence.[6] On the other hand, mentorship which ignores merit can be very demotivating for those not blessed with a high-level mentor.

A search of the literature indicates that little has been written about the sponsor-protégé relationship. A library computer search showed no current articles on the general subject of sponsor-protégé coalitions or alliances. The purposes of the study being reported in this article were (1) to determine the prevalence of sponsor-protégé coalitions or push-pull teams in American organizations, (2) to examine the advantages and special problems of the coalitions, (3) to identify the barriers to their existence, (4) to evaluate the importance high-level executives have placed on their (past) membership in such coalitions, and (5) to ascertain the attitude top American executives had toward sponsor-protégé coalitions.

THE SAMPLE AND METHODOLOGY

The sample tested was obtained from a mail survey sent to 800 corporate presidents and vice presidents, general officers in the Armed Forces, and federal government executives at the GS-16 or higher level. The mailing list for business executives was selected randomly from *Standard and Poor's Register of Corporations, Directors, and Executives*. The general criterion for business executives was that they occupy a very senior position in corporations with over 1,000 employees. Preference was given to executives in very large organizations or in organizations that offered a higher degree of mobility due to the existence of affiliated organizations. The mailing list for federal executives was made randomly from the *Congressional Directory*, the *United States Government Manual*, and a list of women in the federal government, GS-16 and above, prepared by Sarah Weddington, Special Assistant to President Carter, April 2, 1979. The addresses of the general officers queried were obtained from the senior staff changes section in the military trade or professional journals. Fully completed questionnaires were returned by 225 business executives, 10 general officers, and 17 federal executives. Thirty-seven of the returned questionnaires were from women executives. Forty percent of the responses were from firms with over 10,000 employees. The sensitive nature of the questionnaire dictated that answers be given anonymously.

Data for this study were collected using a two-page questionnaire. Respondents' perceptions regarding sponsor-protégé coalitions were measured on a five-point Likert scale—agree strongly; agree somewhat; neither agree nor disagree; disagree somewhat; disagree strongly.

FINDINGS

Prevalence of Sponsor-Protégé Coalitions

The extent to which sponsor-protégé coalitions or "push-pull" teams exist in organizations is difficult to measure or recognize because of the subtle nature of many of the alliances. Sponsor-protégé coalitions may be confused with efficient work teams, moving through the hierarchy together, in which there is only a limited effort to sponsor the careers of the subordinates. Also, the subordinates are not consciously engaged in attempting to push their superior upwards in the organization. Sponsor-protégé coalitions may be very subtle and not aggressively worked or recognized.

Respondents made the following comments about the existence of coalitions: "In most large organizations such alliances must be suspected, if not acknowledged." "These coalitions are not necessarily made up of a senior man who is only one step ahead of the junior man." "The sponsor-protégé relationship is sometimes unconscious—the people one knows can perform are favored over the ones unknown and replace the incompetents. The sponsor and protégé are not always aware of their relationship."

Thirty-one percent of the respondents either agreed strongly or agreed somewhat that sponsor-protégé coalitions are prevalent in the organizations that employ them. Slightly more than half the respondents stated that the coalitions were not prevalent in their organizations. It is suspected that a higher percentage of respondents would have acknowledged the presence of the coalitions in their organizations if the term "coalitions exist" had been used instead of "coalitions are prevalent." The fact that they do exist to a rather high degree in nearly one-third of the organizations in the sample indicates that it is a phenomenon or concept of considerable importance.

Advantages of Sponsor-Protégé Coalitions

There is little to question in the statement that the protégés in the sponsor-protégé alliance enjoy special

advantages in their competition for promotion that their peers do not have, such as increased organizational visibility, access to information, a personal guidance counselor, help in passing through the "filter points" at which disproportionate numbers are screened out of progressively higher managerial levels, and preferential treatment in assignments. "Allying yourself with your immediate superior not only wins the executive's confidence, but also allows you to expand your role within the organization."[7] Only 27.0 percent of the respondents disagreed that their coalition memberships had not facilitated their careers.

The sponsor-protégé relationship can be a two-way street, with the protégés being instrumental in the sponsor's promotion(s), especially if the relationship continues to exist because the members are highly complementary to one another—the brilliant trial lawyer who owes much of his success to the expertise of his research assistants, or the successful, dynamic general who would be severely handicapped without his able planners or G-2s. Juliette Moran, a top executive at GAF, emphasized the importance of the boss pulling good subordinates up when she made the following statement about Jess Werner, chairman of the board of GAF: "Dr. Werner is a very bright man who took several people along as he moved up the ladder. . . . He took us along because we were useful!"[8]

When sponsor-protégé coalitions move up they should be more efficient initially because members are used to working with one another. Do they continue to have an advantage over or outperform boss-subordinate teams where the sponsor-protégé relationship does not exist? The executives surveyed were asked to indicate the intensity of their agreement or disagreement with the following statement: "Sponsor-protégé coalitions tend to outperform boss-subordinate combinations where the sponsor-protégé relationship does not exist." By a margin of nearly two to one the executives queried disagreed with the statement.

While the average consensus is that they do not outperform non-sponsor-protégé work teams, a significant proportion of the executives surveyed (27%) felt that they do. There were no comments made by respondents indicating that the performance of coalitions suffered extensively because of the sponsor-protégé relationship.

Special Problems of Sponsor-Protégé Coalitions

The existence of sponsor-protégé coalitions can present some problems for their organization and for the individual members. There is a danger of inbreeding as executives move up together, especially when the sponsor has chosen protégés primarily because they have his set of values and his orientation. The opportunity cost of coalitions which preclude the formation of new boss-subordinate combinations that might prove more synergistic or more adaptive to new environments or new tasks could be high. There can be the advantage of not becoming overly dependent. Even the best sponsors must usually be abandoned if the protégé is to reach full maturity. The sponsor may not be capable of advancing as fast as his protégés, and the protégés might be reluctant or unable to vacate their coalition.

Respondents made the following comments about the negative aspects of sponsor-protégé coalitions. "The arrangements can be detrimental when cliques are formed and other non-championed, highly-capable personnel are excluded and/or deterred from deserved promotions." "They are destructive if based on bias, friendship, sexual attraction, family/political ties, etc., rather than skills to do the job." "If sponsor-protégé relationships exist in an organization of professionals, then when failure occurs, the entire team sometimes must be replaced." Farris and Ragan cited the hazards or dangers of the mentor-protégé relationship in the following quote:

> Although there are obvious advantages and benefits to the mentor-protégé relationship, any affiliation that involves a type of emotional closeness also leaves room for dependencies, disagreements, animosity, and a parting of the ways. The mentor-protégé relationship is no exception.[9]

Respondents were asked to evaluate three possible problems resulting from the existence of coalitions—resentment by non-members, the loss of highly qualified executives who did not have a sponsor, and the negation of formal effectiveness reporting systems. Only 10.0 percent indicated that non-members of sponsor-protégé coalitions do not resent members of such coalitions. Sixty-five percent agreed strongly or agreed somewhat that there was resentment. The remainder were neutral in their observations. When asked if the competitive disadvantage of competing individually against sponsor-protégé coalition members had resulted in their organizations' loss of some highly qualified executives, respondents' replies did not indicate that this was a major problem. Only 7.7 percent strongly agreed that it was a problem; another 14.3 percent agreed somewhat that it was a matter for concern in their organizations. Fifty-seven percent (57%) disagreed that it was a problem; twenty-two percent (22%) were neutral in their answers.

In the example given earlier about Air Force officers X and Y, the ultimate reason for the navigator's rapid rise to the rank of full colonel was the unbroken stream of superior performance reports he had received from his sponsor. Where selection for promotion is by remote boards using performance reports, inflated performance evaluations can complicate or invalidate the selection process. Respondents were asked how often they had observed that longstanding sponsor-protégé coalitions tend to negate formal merit promotion systems as sponsors give inflated effectiveness reports to protégés. Over 60.0 percent indicated they had frequently or occasionally made this observation. Apparently, inflation of performance/effectiveness reports by sponsors is a subject for some concern in many organizations.

Organizational Barriers to Sponsor-Protégé Coalitions

Possibly the most formidable barrier to the creation of sponsor-protégé coalitions is the negative viewpoint some top executives have about the coalition. For example, one executive commented: "Sponsor-protégé coalitions are havens for weak, corrupt, exploitative people who are not sufficiently self-reliant and altruistic to be entrusted with responsibility for important matters." A number of the respondents commented that they would not tolerate the formation of coalitions in their organizations. "Business is tough, and there is no room for personnel practices not based on ability."

A main barrier, intentional or unintentional, to the continued existence of longstanding upwardly mobile coalitions or push-pull teams is the difficulty sponsors have in taking their protégés with them when they move. Only one-fourth of the executives surveyed took one or more protégés with them the last time they switched companies or agencies. Respondents were asked to agree or disagree with the following comment: "It is easy to modify your organization's structure and staffing to accommodate an incoming or rising executive's desire to bring his protégé with him at the middle management level; at the top management level." There was general disagreement at both levels that it was easy for executives to bring along their protégés. Only 7.4 percent agreed that it was easy at the top management level, while only 2.8 percent thought it easy at the middle management level. One major general respondent wrote: "Sponsorship is not as long lived as it was in earlier times of my military service because sponsors can no longer move people with them when they move nearly as easily as in the past. Moreover, promotion by board members is perceptive and counters efforts to sponsor undeserving people." Promotion by board action mentioned above and central assignments are two additional barriers to the misuse of sponsor-protégé coalitions. Promotion boards appear to be able to cope with inflated effectiveness reports to some degree. When 92.0 percent of the officers in the Air Force received "nines," the loftiest rating at the time in 1974, other parts of the effectiveness report such as narrative comments of evaluating and reviewing officers and the duty description, which portrays scope and level of responsibility, influenced an assessment of overall quality and potential vis-a-vis the numerical ratings.[10] When all bosses are inflating subordinate effectiveness reports, the advantage of having a sponsor diminishes.

An Executive Assessment of Their Membership in Sponsor-Protégé Coalitions

The corporate presidents, vice presidents, officers, and federal executives surveyed were asked if they had ever considered themselves to be a member of a sponsor-protégé coalition. Forty-six percent stated that they had been members at one time or another in the following roles: sponsor only (3%), protégé only (15%), both as a sponsor and as a protégé (28%).

Respondents who indicated that they had been members of coalitions were asked if their membership had facilitated their ultimate promotion to their current position. A slight majority agreed strongly (21.7%) or agreed somewhat (29.6%) that membership had facilitated their promotions. Only twenty-seven percent (27%) disagreed that membership in sponsor-protégé coalitions had aided their careers.

The Existing Attitude of Top Executives Towards Sponsor-Protégé Coalitions

One of the purposes of this study was to make an assessment of the attitudes of top executives towards sponsor-protégé coalitions. The following question was used to make this assessment: "Weighing the advantages of sponsor-protégé coalitions (existing, compatible, proven teams) against the possible disadvantages (internal politics, favoritism, orphaned protégés), would you encourage the formation of such coalitions among the executives under your supervision?" From their evaluations it was apparent that few top executives favored the formation of coalitions. The tabulated results were: strongly agree with the statement (favor coalitions) (2.8%); agree somewhat (11.5%) versus disagree somewhat (20.8%); and disagree strongy (40.7%). On the Likert scale the score on this question would definitely be towards not favoring the formation of the coalitions. Comments ranged from "The disadvantage of the sponsor-protégé combinations completely outweigh any possible advantages," to "I see sponsor-protégé coalitions as often honest *skill balancing* teams and when this is true and both are open, then most of the negatives die away."

CONCLUSIONS

The coalitions of a supervisor (sponsor) and certain subordinates (protégés) who have formed alliances to enhance their mutual advancements is not a rare phenomenon in American organizations. The subtle nature of the coalitions tends to hide or veil their importance as a management development tool and mechanism for enhancing advancement possibilities. While coalitions are not admittedly prevalent in the majority of American organizations, they are numerous enough to warrant examination.

Apparently there are more advantages in coalitions for the members than for their organizations. On the other hand, when coalitions are a medium for honest skill balancing, they can increase organizational effectiveness. The sponsor-protégé relationship that exists in the coalitions can be a helpful management development vehicle for the upwardly mobile, capable protégé. When the protégés are truly competent, their membership in a coalition can prevent their becoming lost in large organizations. Conversely, the existence of coalitions can be demotivating for the non-sponsored and foster inbreeding and favoritism. Coalitions have resulted to some degree in the loss of highly-qualified, non-sponsored executives, but most top managers do not feel this is a

major problem. A more serious problem of coalitions is their effect on formal merit promotion systems where inflated performance reports can be a problem.

Intentional or unintentional barriers can inhibit the long life of coalitions as team members move up the hierarchy. If top management thought the advantages of longstanding coalitions outweighed the disadvantages and these senior executives desired the formation of the alliances, then the main barrier to their longevity—the inability to take along a protégé—would disappear. Apparently this barrier remains intact in most companies at both the top and middle levels of management. Centrally-made assignments and selection for promotion by remote boards whose members may not know the protégé can reduce to some extent some of the advantages the sponsored might have over the non-sponsored.

Nearly half the executives in the sample had been coalition members at one time or another, and more than half the respondents who had been members stated that this membership had furthered their careers. The fact that coalition membership had helped their career obviously had not influenced their attitude towards such alliances since less than 15.0 percent would encourage the formation of sponsor-protégé coalitions in their organizations. Despite its disfavor, the subtle sponsor-protégé coalitions will continue to offer promotional leverage to members. Junior managers and students of management and organizational politics should be aware of the coalition's role as a career advancement vehicle.

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[1]Eileen C. Shapiro, Florence D. Haseltine, and Mary P. Rowe, "Moving Up: Role Models, Mentors, and the 'Patron System,' " *Sloan Management Review*, Spring 1978, pp. 51-58.

[2]James G. Clawsen, "Mentoring in Managerial Careers," a working paper (Graduate School of Business Administration, Harvard University, undated [circa 1980]).

[3]Gerald R. Roche, "Much Ado About Mentors," *Harvard Business Review*, January-February 1979, pp. 14-28.

[4]Tilton L. Willcox, "A Self Assessment of the Mentoring Process," *What Can Management Do to Improve Productivity in the 1980 Decade?*, Mississippi State Southern Management Association, 1980, pp. 58-60.

[5]Roy Farris and Linda Ragan, "Importance of the Mentor-Protégé Relationships to the Upward Mobility of the Female Executive," *Mid-South Business Journal*, Vol. I, Number 4, October 1981, pp. 24-28.

[6]George T. Harris, "Godfathers and Gossips," *Industry Week*, October 27, 1980, pp. 32, 36-37.

[7]Andrew S. Edson, "Mentors: Do They Work in PR?" *Public Relations Journal*, July 1980, pp. 18-19.

[8]Ruth Halcomb, "Mentors and the Successful Women," *Across the Board*, February 1980, pp. 13-18.

[9]Farris and Ragan, p. 27.

[10]Edward Gates, "How Best To Curb OER Inflation," *Air Force Magazine*, April 1981, p. 95.

THE COMPUTER CENTER

by Peter L. McMickle, Ph.D., C.P.A.

COMPUTERIZED ACCOUNTING SYSTEMS: ARE WE LOSING CONTROL

With the price of computer hardware and software falling rapidly, it seems as if almost every business now wants or has a computerized accounting system. The advantages of these systems are well known. The disadvantages are not so widely publicized.

Anyone who has been involved in the actual installation of a computerized accounting system will agree that improvements may not be easily or immediately achieved. The new system may have hardware or software bugs that need to be ironed out over time. People have to be trained in the operation of the system. Frequently, there is a reorganization and shifting of jobs. Some personnel may be released, or the work force may be reduced by attrition. The costs of equipment and software upkeep are often much greater than was planned. In a few circumstances, the computerized system may be slower and require more personnel than the old manual system; but, even in these instances, the new system will usually allow for much greater growth potential. Ultimately, most of these problems are resolved and the system performs pretty much as it was expected to.

What was not expected is the inflexibility of the new system and the serious control problems which have been created by its introduction into the business. Inflexibility can be cured by more creative programming. The control problem is more fundamental and, as a result, much more difficult to solve.

Inflexibility

The small- to medium-sized business usually buys off-the-shelf, proprietary software produced by a software house. Currently, the majority of such accounting software programs have fixed formats for inputs, file structures, and reports. Often there is a poor interface between what the program provides and what the business is use to using.

Even after the firm has adjusted for changes in the way data are inputed and recorded, there is a continuing problem with the reports. They may not be what management needs or wants. The solution is expensive. A programmer unfamiliar with the program and without adequate documentation can be hired to modify the software. In a dynamic business environment this can lead to a permanent position for an in-house programmer who continuously modifies and upgrades the software.

Much of this inflexibility can be avoided to begin with by better designed programs. Some software companies have become aware of the problem and are correcting it. Software can now be purchased that allows the user to *customize formats* without reprogramming. Businesses should insist upon this feature in the software they purchase.

Contol Weaknesses

The most serious problem with today's computerized accounting systems in comparison to traditional manual systems is not inflexibility, but control. Some firms have learned the hard way how much easier it is for fraud to be perpetrated in the typical computerized environment and how much more difficult it is to detect.

This control problem is inherent in the way in which today's computerized accounting systems have been designed. It should be remembered that most of these systems have been developed by programmers who are not accountants. Although these individuals are intelligent, they are usually unfamiliar with the fundamentals of double-entry accounting, even with debits and credits. In a recent issue of *PC Magazine* [Feb. 1983, p. 136], a review of eight general ledger programs criticized all of the products for problems that reflected a lack of familiarity with accounting on the part of the developers. The most significant result of this unfamiliarity with accounting has been the destruction of the basic control structure found in traditional double-entry accounting systems.

In a well-structured accounting system, each sub-system independently communicates (sends a journal voucher or

batch control total) with the General Ledger Department where the information is compared and reconciled before entry into the Control Accounts. Consider, for example, the purchase of $1,000 in merchandise. The following communications to the General Ledger would take place:

	Journal Vouchers or Batch Control Totals to General Ledger		
Sub-System Sending	Account	DB/CR	Amount
1. Purchasing	Purchases	DB	$1,000
2. Accounts Payable	A/P	CR	1,000
3. Inventory	Inventory	Db	1,000
	Purchases	CR	1,000
4. Cash Disbursements	Cash	CR	1,000
5. Accounts Payable	A/P	DB	1,000

This separation of duties and independent communication to the General Ledger is an historic cornerstone of good accounting control. In the example, the payout of $1,000 by Cash Disbursements must independently correspond to what Purchasing says was purchased, what Inventory says it received, and what Accounts Payable authorized and later reviewed.

Contrast this historic approach with the typical configuration of today's "integrated," computerized accounting systems. TCS Software (Houston, Texas) and Peach Tree Software (Division of MSA, Atlanta, Georgia) are two of the bigger firms for micro-computer software. They both divide their accounting systems into five semi-integrated modules:

1. Accounts Payable
2. Accounts Receivable
3. Inventory
4. Payroll
5. General Ledger

A purchase of $1,000 in merchandise would be recorded as follows:

	Subsidiary Accounts		
Module Updates	Account	DB/CR	Amount
1. Accounts payable only	A/P	CR	$1,000
	Purchases	DB	$1,000
	A/P	DB	$1,000
	Cash	CR	$1,000

Net Balances are available on file for direct updating of the General Ledger. Inventory is independently maintained and does not integrate into the regular system.

All entries for the purchase are controlled by the operator in charge of accounts payable. This is an advertised virtue that is, in fact, a handicap. One party controls the recording of the purchase, the opening and closing of accounts payable, and the disbursement of cash. The amounts that interface with the General Ledger should always balance because they all come from the same source.

The General Ledger no longer performs its traditional role of the "Grand Controller" of the accounting system. The traditional control structure of separation of duties coupled with independent regulation has been destroyed.

A clever operator can now process improper invoices for fictitious purchases, and the system will no longer automatically detect the irregularity. Receivables can go unrecorded for friends of the operator and still balance with control totals for sales.

These are just the beginning of the potential control problems. Because of the low cost and ready availability of hardware and software, employees can now buy and experiment with exact duplicates of their employers' accounting programs. Modifications for their own benefit can be developed and introduced into the firms' systems. This can result in the creation of unauthorized payments and the shipment of unpaid-for merchandise.

A further refinement is the creation of self-destruct features that hamper reconstruction of the fraud should it be accidentally discovered. In fact, many commercial systems already contain a "delete function." Carl Heintz writing in *Interface Age* [May 1983, p. 84] refers to such functions as "dangerous," their indiscriminant use could cause a ledger to be "materially changed with precious little documentation to indicate the manner in which it was changed."

Why has the accounting profession allowed this problem to develop? One factor is the evolution of computerized accounting systems over the last few decades. When the computer was first introduced, its potential was almost immediately recognized. However, the costs were so staggering that a company could only afford a single processing unit. Separation of functions had to be eliminated because utilization of a single computer required centralization.

Such centralizations would have been unthinkable in the manual accounting environment. It was as if the large company now had a single, all powerful bookkeeper complete with all the problems on a grander scale inherent in a one-bookkeeper accounting system. The only control solution, and an inadequate one at that, was the same as for the small business with one accounting employee: close supervision.

Control sections were developed that manually compared inputs with outputs. High security was instigated limiting access to the hardware and software. Programmers were separated from operators. Operators were supposed to be individuals with little training or interest in computers beyond what it took to operate the equipment.

Accountants had been lulled to sleep by the fact that computerized systems had to be centralized because of cost. Many accountants were uncomfortable with the systems but reluctant to admit their lack of familiarity and understanding with the more modern ways of doing things.

The factor that created the need for centralization—high equipment cost—is no longer as significant as it once was. It is now possible for even small businesses to afford separate computers, separate software, and separate files for separate functions. All the benefits of a centralized system can be maintained through telecommunication,

and the General Ledger can be restored to its position of "Grand Controller." As accounting system theory becomes more widely disseminated and understood, a return to the past may be a big part of the future of computerized accounting systems.

U. S. CONSUMER PRICE INDEX - U[1] (UNADJUSTED)
1967 = 100.0

Month	1978 CPI	1979 CPI	1980 CPI	Percent Change Month Ago	Percent Change Year Ago	1981 CPI	Percent Change Month Ago	Percent Change Year Ago	1982 CPI	Percent Change Month Ago	Percent Change Year Ago	1983 CPI	Percent Change Month Ago	Percent Change Year Ago	1984 CPI	Percent Change Month Ago	Percent Change Year Ago
Jan.	187.2	204.7	233.2	+ 1.4	+13.9	260.5	+ 0.8	+11.7	282.5	+ 0.4	+ 8.4	293.1	+ 0.2	+ 3.8			
Feb.	188.4	207.1	236.4	+ 1.4	+14.1	263.2	+ 1.0	+11.3	283.4	+ 0.3	+ 7.7	293.2	+ 0.0	+ 3.5			
March	189.8	209.1	239.8	+ 1.4	+14.7	265.1	+ 0.7	+10.6	283.1	- 0.1	+ 6.8	293.4	+ 0.1	+ 3.6			
April	191.5	211.5	242.5	+ 1.1	+14.7	266.8	+ 0.6	+10.0	284.3	+ 0.4	+ 6.6	295.5	+ 0.7	+ 3.9			
May	193.3	214.1	244.9	+ 1.0	+14.4	269.0	+ 0.8	+ 9.8	287.1	+ 1.0	+ 6.7	297.1	+ 0.5	+ 3.5			
June	195.3	216.6	247.6	+ 1.1	+14.3	271.3	+ 0.9	+ 9.6	290.6	+ 1.2	+ 7.1	298.1	+ 0.2	+ 2.6			
July	196.7	218.9	247.8	+ 0.1	+13.2	274.4	+ 1.1	+10.7	292.2	+ 0.6	+ 6.5	299.3	+ 0.4	+ 2.4			
Aug.	197.8	221.1	249.4	+ 0.6	+12.8	276.5	+ 0.8	+10.9	292.8	+ 0.2	+ 5.9	300.3	+ 0.3	+ 2.6			
Sept.	199.3	223.4	251.7	+ 0.9	+12.7	279.3	+ 1.0	+11.0	293.3	+ 0.2	+ 5.0	301.8	+ 0.5	+ 2.9			
Oct.	200.9	225.4	253.9	+ 0.9	+12.6	279.9	+ 0.2	+10.2	294.1	+ 0.3	+ 5.1						
Nov.	202.0	227.5	256.2[a]	+ 0.9[a]	+12.6[a]	280.7	+ 0.3	+ 9.6	293.6	- 0.2	+ 4.6						
Dec.	202.9	229.9	258.4	+ 0.9	+12.4	281.5	+ 0.3	+ 8.9	292.4	- 0.4	+ 3.9						
Annual Avg.	195.4	217.4[a]	246.8			272.4			289.1								
Annual Change	--	11.4	13.5			10.4			6.1								

[a]Revised.

[1]The Consumer Price Index for All Urban Consumers reflects the buying habits of about 80 percent of the non-institutional civilian population of the U.S. and also uses a market basket based on the 1972 and 1973 expenditure survey.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

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1984 MID-SOUTH BUSINESS OUTLOOK

*Avron Fogelman**

I'm going to take the title of this conference literally. I'm going to give you the Mid-South business *outlook*, and I'm going to do it in one word. The outlook for business in the Mid-South is good.

Exactly how good depends on a lot of things:

First, it depends on who or what we compare ourselves to. If we compare what the economy of this area should produce in 1984 with what it did produce in 1981 or 1982, next year is going to be very good. If we compare the sheer dollars of this region with those of some sun-belt high-rollers, we might be disappointed.

Second, it depends on the level of our expectations. Are we looking for steady progress or a quantum leap? Will we settle for short-term gains or long-term momentum?

Third, it depends on the direction of our energies. Does the leadership of this community devote their time and resources to their own personal and professional pursuits? Or, will we finally give more of ourselves to the broad work before Memphis for its economic and social well-being? When do we start caring?

Fourth, exactly how good the Mid-South business outlook is depends the quality of our own performance—as individuals and as a community: Who can better determine our fate than ourself?

I don't have all the answers. The answers over the next 12 months have to come from you and me, from our business peers, our government leaders, and our fellow citizens.

I began by saying our prospects for the coming new year are good.

That is not mere optimism.

In the first place, most of the indices of the national economic recovery remain positive and, increasingly, we are all dependent on the economic ebb and flow of the nation and the world. While Memphis and the Mid-South may have lagged the U.S. resurgence by a few months, we are catching up. It is quite obvious that retail sales and housing starts continue on a strong upward spiral; and the most recent analysis from the Chamber of Commerce shows 159 new plants and expansions in the Memphis area through October 31, bringing more than 3,600 proposed new jobs and some $217 million in potential new investment. Compared to the same period of 1982, that's 35 more new plants and expansions, an increase in possible new employment of 869, and a rise in indicated investment of almost $250 million.

We have every reason to expect that the momentum of 1983 will continue well into 1984.

Second, and more pertinent to the purposes of this discussion, this community finally is in a new and strong position to take advantage of its own opportunities. Some of these are:

- Memphis-based companies like Federal Express and Holiday Inns are highly visible and well respected nationwide trend-setters of corporate leadership and growth and, therefore, are, in fact, dynamic image-builders for the city.
- The rebirth of Beale Street and a boom in commercial renovation and new construction in the downtown area gives us not only good economic health, but also the admiration of visitors and the confidence of developers and citizenry to create even more business formations.
- Also, in our Uniport program, in our tourism initiatives, and in our concept of a Biomedical Research Zone at the western edge of the Medical Center, we have the kind of organization and planning that are the keys to long-range and lasting economic development and jobs growth.
- By rescuing the International Harvester plant, we have demonstrated to the rest of the country that the old saying about Memphis not caring for the needs of labor or management is a bum rap, and, just as important, we have proved to ourselves that business and government can work together and produce something visible and constructive for the benefit of the whole community. We salute Mayors Hackett and Morris for their outstanding contributions in this successful effort.

And, there is much more heavy ammunition in the arsenal of this community; assets Memphis has built and continues to build are now well-known and part of the big picture that didn't exist a few years ago.

- New tourist and recreational facilities like Mud Island and Graceland and Shelby Farms.
- New offices and installations from national and international firms like Sharp Manufacturing, Williams-Sonoma, and Merrill, Lynch.

**The author is President of Fogelman Properties and President of the Memphis Area Chamber of Commerce. Presentation at Mid-South Business Outlook Conference, December 1983.*

- New capital projects like an enlarged Mid-South Coliseum, a renovated Orpheum Theater, and a new Convention Center hotel.
- New programs to provide financial assistance and incentives to business like the Minority Enterprise Small Business Investment Corporation (or MESBIC), the Center City Revenue Finance Corporation, and ongoing community forums like the Jobs Conference.
- A growing establishment of professional sports attractions like the Memphis Showboats, the Memphis Americans, and, if you will pardon me, the Memphis Chicks.

In short, on every front that really counts in the struggle for economic urban growth, stability, and progress we are indeed advancing. We are now aware, we are now active, we are, in fact, alive. All of us as a community then should be looking forward to 1984—and beyond—with eager anticipation.

As a businessman, as a Memphian, and especially as President of the Memphis Area Chamber of Commerce, I am excited about Memphis. I say especially in the case of the Chamber because the higher Memphis' star rises, the greater opportunity the Chamber has to serve the economic growth of Memphis.

In order for this area to capitalize on the list of advantages I've just identified, I believe there are three rather broad areas in which much of our community effort over this next year should be concentrated. As 1984 President of the Chamber, I will suggest three special task forces: (1) improvement of quality of life, (2) professionally marketing the city, and (3) developing the spirit of entrepreneurship.

I'd like to discuss each in a little detail from a community point of view and draw you a brief outline of what I will propose in the way of an action program when our new Chamber Board of Directors meets in January to adopt its official agenda for 1984.

But first, allow me just a few moments to give you some background on the Chamber's recent activity and why I believe this is the organization that is particularly well positioned now to enter into a leadership position in this new and more productive era for metropolitan Memphis.

Last year, the Chamber Board adopted a three-year strategic plan designed to reorganize the Chamber and prepare it to deal more effectively with the dramatic changes of this community.

In 1983, the Chamber committed itself to the future; we decided to focus our resources on this city's economic growth and develop a structure to face the issues and needs for long-term prosperity of the region.

We stopped looking back and started looking ahead. We have now officially ended a period of reacting to past events and begun an era of positioning the Chamber to control events yet to come. We are prepared to take the economic leadership role in concert with the thoughts of our mayors.

Back to the special task forces. It is an accepted fact today that business growth and relocation decisions turn less on questions of hardware and more on quality of life and amenities in a community. In other words, what Memphis offers in the way of land, roads, and utilities isn't as important as what Memphis provides in the way of art, culture, entertainment, friendliness, and recreation. In the first instance, most cities have become very much alike. Over the 1980s and 1990s, the winners in the race for growth are going to be those cities which make themselves the most *pleasant* places to live and work.

I know Memphis has long needed a competitive edge. One of them can be livability.

And that's why I'm proposing that the Chamber establish the task force on quality of life. Its mission will be to work closely with existing efforts in this area (like Mayor Bill Morris' Economics of Amenity Program), determine where the Chamber can provide direct, productive assistance, and then marshall the necessary resources to get the job done. Mayor Morris' Amenity Program will receive our top priority. Let us develop real livability and jobs will follow.

In the same fashion, I'm calling for a task force on marketing of this city—a need to reconceptualize metropolitan Memphis.

Mayor Hackett has indicated recently that he is interested in establishing a central office to be responsible for selling the advantages of Memphis. A professional marketing plan in a unified fashion is essential and has been a missing link in this city's development. As I indicated earlier, Memphis has the steak, but Memphis isn't selling the sizzle; and we'll not reach our full potential until we do.

Let's face it, beyond our own borders there is little concept of what Memphis is and what it might become. Yet the same business leaders of America who draw blanks about Memphis now have clear images of Baltimore or San Antonio or a dozen other cities with which we must compete every day. We need to put together a unified, comprehensive, and first-class act and get it on the road.

That's a big job and one that has been undertaken far too haphazardly in the past. A lot of people and groups, public and private, need to be involved. The Chamber stands ready to assist in these endeavors.

Finally, I'm going to suggest a task force aimed at promoting the spirit of entrepreneurship which so distinguishes the business history of Memphis.

It is a well-established fact that most new jobs in this country are created by small businesses, firms with fewer than 100 employees, and that remains a proper area of concentration for the community and the Chamber. But we have not focused on a singular part of the equation, namely that 41 percent of all new jobs flow from the start-up of new businesses. And it seems to me, that is a made-to-order target for the city that gave the world the forerunner of the modern supermarket, St. Joseph's Aspirin, Holiday Inns, and overnight package delivery.

How many new Clarence Saunders, Abe Ploughs, Kemmons Wilsons, or Fred Smiths may there be in this community who need not only encouragement, but some kind of specific help to put their inspirations and their dreams to work?

Whether it be innovative venture capital programs, or technical assistance, or management consultation, or regulatory relief, there must be ways to provide a unique environment in Memphis for entrepreneurial talent.

In this regard, I would also like to see some serious thought given to establishing here a hall of fame for local business leadership into which we could induct new members each year.

We celebrate the musical heritage of Memphis. Why shouldn't we also celebrate the business heritage of Memphis? When it comes to building images, we surely have rightful claims on both.

I am proposing task forces on quality of life, marketing and conceptualizing the city, and entrepreneurship because I believe these are the three most important themes for community-wide attention in 1984, because I want to set these efforts apart from the normal work of the Chamber's important standing committees and councils, and because I want them to be oriented to results. Jobs and economic growth will follow.

For the same reasons, and in an effort to provide challenging opportunities for Chamber officers and directors, I am also asking that the task forces consider outside experts to be engaged as they may deem desirable and necessary to be of assistance in conjunction with the mayors' offices.

Real economic development comes from the development of whole communities—from constant effort to build the city from the bottom up—and that requires the long-term commitment and concern of everybody in business and government and all civic interests.

Working together, we have a chance to make 1984 a landmark on the road to the greater Memphis that we all want. I recognize that there are limits to what we can do for Memphis in one year, but let us all see that there are no limits on what might come after this one year's accomplishments.

EXPORTING THE FEDERAL DEFICIT

*Eliot Janeway**

The Complaint:

The extortionate interest rates resulting from astronomic deficits.

The Cure:

Export the deficit by selling to dollar-rich OPEC governments long-term, non-marketable Treasury paper subject to no interest charges until maturity.

The History:

No exercise in rediscovering the wheel is needed; fiddling with its old spokes will do the trick. The movement of money follows the movement of ideas. In the first chapter of American financial history, Alexander Hamilton imported from London Robert Walpole's thinking about how to re-fund a mountain of short-term debt into comfortable long-term paper. Hamilton's market operations then attracted the money of shrewd British speculators, who joined his Tory constituents in buying up the debt of the Continental Congress at deep discounts and converting it into his brand-new, gilt-edged "funded debt." During the Civil War, J. P. Morgan made his reputation by finding hard European money to relieve the Treasury of the pressure to place short-term paper. These two episodes, celebrated in forgotten tomes, illustrate the axiom that battles to defend currencies from deficits, like battles between armies, are best fought overseas. Hindsight has associated both victories with the growing pains of a young republic, but as America came of age she ignored the applicability of her struggle to remain maturely productive and avoid sliding into decadence.

More recently, in 1962, the Kennedy administration revived this approach without recalling its hoary tradition. It pioneered a device for placing nonmarketable, long-term Treasury bonds with governments that were dependent on the United States, friendly enough to admit it, and rich enough to help her. These instruments bear the official designation of Roosa Bonds. They were the creation of Robert Roosa, then the undersecretary of the Treasury for monetary affairs. A superb technician, Roosa designed these private placements to ease the pressure on the dollar that had developed with the rise in the U.S. balance-of-payments deficit. During 1961 and 1962, the deficit had jumped to $3 billion, which at that time seemed big enough to be troublesome; it put the dollar under a cloud, even though the United States was still running a comfortable trade surplus.

Beginning in 1962, the U.S. Treasury placed a total of $10 billion to $15 billion of Roosa Bonds with the three dollar-rich central banks. The West German Bundesbank took the lion's share. The Swiss authorities put their Good Housekeeping seal of approval on Roosa Bonds by buying some, and the Japanese authorities advertised their country's new status as a dollar power by following suit. This impressive achievement psychologically displaced an overwhelming amount of selling pressure on the dollar. Even more, it advertised the solidity of America's partnership with both her defeated former enemies and called attention to their financial strength and Washington's political determination to ensure the stability of the dollar. Interest rates were not a problem then, and Roosa Bonds carried coupons approximately equal to going market rates.

In any case, the consideration in this intergovernmental transaction was not yield but management of the dollar deficit. The maturities ran for two to five years. Moreover, the fine print made them readily extendable, if needed or even desired. More providential still as a token of the cooperative spirit Roosa inspired, they protected the United States against an exchange-rate penalty in the event of dollar weakness. However, as in the case of Hamilton's historic achievement and of Morgan's, Roosa's was shrugged off as relevant only to the specific problem he solved. Its applicability to the recurrence of the same problem in different form was forgotten, although the Treasury still routinely lists its nonmarketable debt in a special category.

Reagan had spent six full years on the campaign trail spouting slogans extolling the sanitizing, invigorating wisdom of "free-market forces" and deploring the government's heavy-handed intervention into their "miraculous workings." These same markets, supposedly straitjacketed by government interference, had by 1982 improvised a characteristically safe and shrewd defense against the erosive effect of insupportable interest rates in credit standings. This improvisation was simple enough to become an instant success in the Eurodollar bond market.

The new device was the "zero-coupon" bond. It was exactly what this descriptive tag suggested: a non interest-bearing bond issued at a more or less deep discount

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(deeper if the credit rating of the issuer was lower but in any case redeemable at maturity for par). Corporations in need of long-term money and/or under pressure to raise cash easily placed bonds by the billions all through 1982. To be sure, some corporations with credit ratings less lustrous than Exxon's, let alone the U.S. Treasury's, accepted discounts of over 50 percent; others settled for maturities of no more than five years. So buying the Reagan prospectus and trusting the workings of the free market (which the Eurodollar market certainly is) calls for the U.S. Treasury to follow where corporate treasuries have led: into selling U.S. Treasury zero-coupon bonds to foreign buyers, subject to three caveats—that the buyers be governments, that the issues be nonmarketable, and that the discounts be nominal.

The Symptoms:

- Interest rates remaining unacceptably high, even when dropping drastically.
- Drops in interest rates—even temporary ones—destabilizing markets.
- Collapse of the economy becoming the condition for drops in interest rates.
- Pervasive fears, not just inside the securities market but throughout the economy, that insatiable governmental demands for credit would crowd out private claimants for the productive borrowings needed to produce the earnings needed to produce the tax revenues needed, finally, to reduce the deficit: a Catch-22.
- Another Catch-22 of the collapsed economy: collapsing tax collections and inflating tax refunds (to the point at which fiscal 1983 tax refunds of $112 billion, if avoided by a vigorous economic recovery, would have converted the $110 billion deficit into a $2 billion surplus).
- Volatility in the securities markets incited by speculation over Treasury/Federal Reserve maneuvers and manipulations for financing the debt, with market offerings inflating rates, and/or bank placements inflating the money supply.
- The paradox of hyped-up dollar strength resulting from foreign money alternately chasing usurious interest rates and speculative market profits, contributing to the collapse in the economy by overpricing American exports while inviting cheap imports.
- Early warnings of hyperinflation, Continental Congress style.

The Treatment:

In correspondence with Senator Slade Gorton of Washington in April 1982, I put forward a proposal for the United States to offer no-interest, nonmarketable, long-term bonds carrying a modest premium at maturity to Arab central banks in exchange for the guarantee of American protection. This approach recognizes that the sheiks continue to control the largest single foreign pool of dollar power, despite the political disaster they had engineered for themselves. The fact of their political impotence accentuates their need to use dollar power to buy protection. Terms: coupon, zero; maturity, twenty to forty years; discount, 10 percent; paydowns, none; face value, par. Alternatively, such a debt instrument could be issued at par but redeemed at par plus a 10 percent premium at maturity.

There is a political consideration for offering such a security to a Moslem country where receiving interest income is prohibited, though conspicuously flaunted by the sheiks. The usury issue is a provocation in the inflammatory world of Moslem politics. Profit made by cashing premiums paid by no-interest bonds at maturity, however, is permitted according to the Prophet. The no-interest feature would be an advantage to both parties in the transaction.

An alternative strategy would be to sell the Saudis the Federal Home Loan Mortgage inventory, for example, which consists of $100 billion of first mortgages, by offering them forty-year, non-negotiable U.S. government bonds at a discount but bearing no interest. These terms would relieve the Treasury of the cash drain from the debt and, in the process, reliquify the mortgage agency to resume home mortgage financing without a new appropriation by Congress and/or without burdening the market with new issues of its own. This is no idle theory. Such a deal was all but made by a consortium of American banks through my old friend Wilbur Mills in 1981, but Treasury Secretary Donald Regan successfully opposed it.

A second alternative strategy is to require foreigners buying American fixed assets to buy a limited number of zero-coupon, non-negotiable bonds per dollar of assets acquired (allowing them, however, the right to borrow up to 70 percent of the face amount of such bonds at U.S. banks). "Funk" money from all over the world has been pouring into the United States, not for the purpose of yield or profit but for safety. Foreigners sinking their money into American fixed assets (real estate or businesses) have been buying a fringe benefit in the form of an equity in the continuing existence of the United States as the last safe harbor for property. But they have not been obliged to pay an entry fee in the form of nonmarketable bonds, which would be cheaper than an entry tax because it would be a portfolio asset held until maturity.

For all the local authorities in any American community may know, when title to a piece of property in their jurisdiction passes to the custodianship of a bank from Frankfurt to Singapore or, for that matter, New York, the owners of record behind the veil of anonymity may be Soviet purchasing agents buying their kickbacks from American grain dealers or incumbents of the Kremlin buying insurance against an unlucky roil of the political dice. (When the nuclear arms race heated up in Europe, the Soviet fat cats began to favor Hong Kong as their favorite depository over Zurich, which was too close to the potential firing line.)

The United States has been slow to cash in on its monopoly as the world's money haven. Where else can money go? Japan denies foreigners the free right to purchase fixed Japanese assets, particularly to take title to land. The Arabs still impose the same prohibition, though

anyone trying after the oil war went military would have been in the well-known position of trying to break into jail. Foreigners have become accustomed to routine closeouts elsewhere—devaluation, taxation, confiscation, exchange freezing, labor trouble—and increasingly attracted to U.S. havens.

The incentive feature for private investors would be the right to use such packaged bonds as collateral for borrowing 100 percent of their face amount in the Eurodollar market. The purchase of a $100,000 long-term, noninterest-bearing T-bond could be made the quid pro quo for every $1 million invested in the United States by a foreigner. Why give all the money seeking sanctuary free protection? No one complains about paying fees to enter Switzerland as a visitor commercially. Packaged with the zero-coupon bonds could be gold and silver "dollar eagle" coins, priced at a premium over the bullion market, as is done by South Africa, Mexico, Canada, and Peru. The bonds could be priced at par but with no premium at maturity; the price of the coins would offer sufficient incentive. "Dirty money" on a scale too large to count is routinely bidding to be laundered on terms less attractive.

The Recovery:

The condition of a stable recovery, first in the securities markets and then in the economy, is a drop in interest rates sustained long enough to break the Catch-22 chain reaction deflating the economy and inflating the deficit. The drop in interest rates manipulated by the Fed in the market vacuum of the summer of 1982 served as a short-run market tonic. While it lasted, however, Treasury spokesmen were quick to claim that the cost to the Treasury on interest paid while the deficit was rising was being reduced as substantially as if the deficit had been lowered.

Collateral Advantages:

- Help the Federal Reserve Bank of New York with its new mission of policing the Eurodollar market.
- Resurrect the unknown soldier of America's money battles, the old-time Yankee trader, and show that he is alive, well, and haggling again.
- Cut the spending side of the budget at its only flexible point: interest expense. At, say, a 15 percent rate for T-bills—a rate difficult to figure but easy to anticipate—every $100 million of debt frozen in the hands of client governments saves $15 billion of annual interest expense plus the cost of interest on borrowings to pay that interest.
- Bring down long-term U.S. interest rates in response to successful long-term debt financing.
- Provide a durable boon to the bond market.

ECONOMIC CHALLENGES AND OPPORTUNITIES FOR PROGRESS IN 1984

*John E. Gnuschke**

The purpose of this article is to provide a brief review of the performance of the economy in 1983 and then share with you the Bureau's forecast for 1984.

I would like to begin by highlighting several key determinants of the accuracy of our forecasts for 1984.

First, 1983 has been a year of recovery in nearly all respects and has set the stage for 1984. Real Gross National Product has increased in every quarter during 1983. This is in dramatic contrast to the declines in GNP experienced in 1982. After a fourth quarter 1982 decline of 1.3 percent, positive annualized quarterly growth rates have been 2.6 percent, 9.7 percent, and 7.7 percent for the first three quarters in 1983 and are expected to be between 5.0 and 6.0 percent during the fourth quarter. An unemployment rate of 10.7 percent in December 1982 has declined rapidly to 8.4 percent in November 1983. Capacity utilization rates have increased steadily from a low of 69.0 percent in December 1982 to 79.0 percent during the fall of 1983. Real personal income, declining throughout 1982, rebounded in 1983 and has led to increases in consumer spending and saving throughout the year. Inflation rates measured by consumer prices have continued to decline from the record highs of nearly 15.0 percent in 1980 to less than 4.0 percent in 1983. Similarly, interest rates, reflected by the prime rate, have declined dramatically from over 14.0 percent in August 1982 to less than 11.0 percent in August 1983. The year of 1983 has also been a period of revitalization for the retail trade, construction, and automotive industries. Weaknesses in commercial and office construction have been offset by the strong rebound of housing starts and sales. Rebounding domestic auto sales have also helped facilitate the recovery of automobile producers and associated firms throughout the nation. Clearly, 1983 has been a period of renewed economic strength and has set the stage for our forecasts for 1984.

The second major determinant of the accuracy of the 1984 forecasts is the accuracy of the assumption that the strength and duration of the national recovery will determine the strength of the recovery in the Mid-South. Any further evidence of a weakening recovery in 1984 followed by a deficit-driven recession in 1985 would severely constrain the Mid-South's recovery.

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Any of the following national events would also have a dramatic impact on the recovery of the Mid-South in 1984 and the accuracy of our forecasts:

1. Renewed inflation driven by consumer spending, food, and energy price increases.
2. Deficit-driven tax increases which reduce disposable income, consumption, and savings.
3. Further devaluation of foreign currencies which increases export prices and reduces the attractiveness of goods produced in the Mid-South.
4. Interest rate increases which result from renewed inflationary pressures or an expanded budget deficit.
5. Expanded international conflict, particularly in the Middle East, with associated energy price hikes and shifts in domestic spending patterns.

Finally, the accuracy of our forecasts will be influenced by structural changes that continue to inhibit the growth of the Mid-South's economy. Distinctions between Mid-South cities in terms of industrial composition will mean that some areas of the Mid-South will benefit more than others from the recovery. Rural/urban distinctions and the reliance of rural areas on argiculture and the success of single industries will accentuate rural/urban differences in income and employment opportunities. Further declines in high-wage manufacturing in urban areas and the shift of employment to low-wage industries will accelerate the establishment of a permanent class of urban workers with few employment or income alternatives. These structural changes will serve to dampen the impact of the national upswing in business activity and may offset the gains expected for the Mid-South.

Since 1980, repeated economic shocks to this community have kept unemployment rates at high levels and have depressed income gains. A series of plant closings and layoffs led by the Firestone, International Harvester, John Morrell, Gordon's, *Press-Scimitar*, and Grace announcements have resulted in dramatic reductions in high-wage employment opportunities in Memphis. Rural areas of the Mid-South have also suffered from plant closings, a symptom of shifting demand, foreign competition, and antiquated capital equipment.

With these factors in mind, there is good evidence to suggest that the dismal performance of the economy since 1980 will not be repeated in 1984.

The forecast for 1984 includes the following: The Bureau estimates an optimistic 5.5 to 6.0 percent growth

in GNP for the nation. Strong growth should continue during the first three quarters of 1984 and may be somewhat reduced in the fourth quarter. The slowdown in late 1984 will be associated with pressure to enact deficit-reducing taxes.

For the nation, the Bureau estimates that unemployment will decline slowly in the first half of 1984 and will be 7.5 percent during the latter part of 1984. The Bureau also estimates that plant utilization will reach a level of 85.0 percent during 1984. Capital expenditures during the last half of 1984 should be particularly strong if signs of a strong recovery continue. Finally, the Bureau forecasts that inflation will increase between 5.0 and 5.5 percent in 1984. The key to inflationary pressure in 1984 will be strong consumer expenditures in the first two quarters and enlarged capital expenditures in later quarters. Federal Reserve policies have slowed the growth of the money supply and will continue to focus attention on keeping inflation fluctuating within a 3.0 to 5.0 percent band.

Bureau forecasts for the Memphis economy for 1984 depend heavily on the assumption that the 1983 recovery will continue through the end of 1984. During the first 10 months of 1983, for example, unemployment rates in Memphis fell from 10.7 percent to 8.7 percent. The Memphis rate compares favorably with the 9.5 percent rate for Tennessee and the 8.8 percent rate for the U.S. during October. Unemployment rates are expected to continue to decline throughout 1984 and reach 7.0 to 7.5 percent before the end of the year. Employee recalls; plant expansions; and thriving retail trade, distribution, and service industries should lead the way in reducing unemployment in Memphis.

Retail sales are expected to continue to rebound in 1984 on the basis of renewed consumer confidence, reduced unemployment, increases in home construction, and aging stock of durable goods. Retail sales for the first 10 months of 1983 were 10.8 percent higher than for 1982. A strong Christmas season combined with other factors should create a favorable market for retail goods throughout 1984. Housing should also experience a mini-boom in 1984. Clearly, many jobs in Tennessee are closely tied to the construction industry. From furniture production and textiles to tubs and tiles, many employers depend on a strong construction market to provide a demand for their products. On the heels of the renewed activity in 1983, the Bureau is forecasting total housing sales of 15,300 units in 1984. These sales amount to an improvement of 320 condos, 700 single-family new homes, and 1,000 existing homes over 1983 levels. This is a dramatic increase from the 1981-82 depression in the housing industry and should be good news to not only the real estate industry but to the wholesale and retail trade industry in the area. Finally, in general, the Memphis area has enjoyed modest but steady growth throughout 1983 and is expected to continue to do so in 1984. The Coincident Index of Business Activity for October 1983 was 146.4 (1967 = 100.0), the highest level since February 1980. The forecast for 1984 is that the Index will surpass its previous all-time high of 149.7, established in April 1979, sometime in the third quarter of 1984.

I believe this is good news for Memphis and for Mid-South business in general.

UNADJUSTED UNEMPLOYMENT RATE

	Oct. 1983	Oct. 1982	Peak
Memphis	8.7	9.7	10.7 Jan. 1983
Tennessee	9.5	11.5	13.7 Jan. 1983
United States	8.4	9.9	11.4 Jan. 1983

RETAIL SALES, MEMPHIS SMSA ($000)

	Oct. 1983	Oct. 1982	% Change
Current $	$520.9	$432.3	+20.5
Constant $	$250.6	$213.6	+17.3

Year-to-date retail sales have increased 10.8 percent over the same period last year.

EMPLOYMENT—SEASONALLY ADJUSTED (000)

	Oct. 1983	Oct. 1982	Trough
Nonagricultural	353.2	355.4	352.3 June 1983
Manufacturing	56.2	57.3	55.9 May 1983

Memphis Coincident Index:

October level was 146.42, the 13th month of consecutive increase. September level was 146.29.

The compounded annual rate of growth is 5.5 percent since the recession hit its trough in September 1982.

GNP: Qtr. 1 . . . . 2.6
Qtr. 2 . . . . 9.7
Qtr. 3 . . . . 7.7

UNDERSTANDING POWER, DECISION MAKING, AND THE MIDDLE MANAGER

*Richard M. Daniels, J. Wayne Patterson, and Thomas W. Zimmerer**

> "For middle managers the best way to achieve promotions is by doing whatever will most please and impress their superiors, regardless of the effects of their actions upon profits of the firm" (Monsen & Down, 1977, p. 449).

The above statement is extremely strong and a condemnation of the road to success for middle managers. The purpose of this article was to investigate what has been written regarding the behavior of middle managers to determine if such a statement has any validity. Does the dynamics of organizational survival and success create such gameplayers? If, indeed, the statement is true, the decision made by middle managers and their use of information has some important implication on our assumptions of how organizations really operate.

In order to understand why the middle manager is the source of much of an organization's goal divergence, it is necessary to understand what motivates the typical middle manager as a person and as a member of an organization. The middle manager is a working person and, as such, his job is more than just a means of earning a living; it is in a very basic sense a definition of his identity as a member of society. The phrase "we are our business cards" has a lot of truth in it. Consequently, his job is extremely important to the American middle manager.

A key factor to the importance of his job, over and above earning a livelihood, is that it allows him to satisfy a basic need that is found to be common among managers. The basic need which motivates most managers is a need for power. This belief is held by McClelland, who stated: "Since managers are primarily concerned with influencing others, it seems obvious that they should be characterized by a high need for power" (McClelland, 1970, p. 31).

Therefore, it would appear that the typical bureaucratic business organization and persons characterized by a high need for power are well suited for each other. For as Zaleznik has observed, "Organizations operate by distributing authority and setting a stage for the exercise of power. It is no wonder therefore that individuals who are highly motivated to secure and use power find a familiar and hospitable climate in business" (Zaleznik, 1978, p. 708).

The person with a need for power is, therefore, drawn to the traditional bureaucratic business organization because it can bestow upon him the authority he needs to exercise his influence over others by assigning the person a position in the firm. This action immediately confers upon him three sources of power. First, he gains power through tradition, since subordinates believe that it is proper for them to obey people in legitimate positions of authority. Second, he gains power through fear, because he can apply sanctions against those who do not obey him. Third, he gains power through coercion, since he can offer rewards to those who obey.

In awarding a position to the manager, the company expects him to make decisions appropriate to his position in the firm. The conventional theory of scientific management espoused by Fredrick Taylor and stated by Tomeski holds that, "Management and supervision should be completely rational in planning and making decisions" (Tomeski, 1977, p. 283). Thus, the ideal manager is expected to carry out the various aspects of his job in an impartial, rational, and dispassionate manner. Beishon cites a basic assumption widely held by industry today:

> . . . the "man" within the "manager" acts solely with regard to the company's interests, he is assumed to be directing his activities toward achieving the company's goals and loyally serving the company at all times. Even where there is a conflict between a man's personal interests and those of the company, the man is expected to sacrifice his own interests (Beishon, 1977, pp. 307-308).

While industry may *assume* that managers are making their decisions in the manner described above, the reality of management is quite different. As Beishon goes on to state:

> The manager is *not* a rational, dispassionate being capable always of calm, considered decisions. He is a human being in a human environment; he has his own personal aims and aspirations which may differ from those of his superior and the company. He has a complex bundle of prejudices and distorted views of reality. He is almost always in competition with others to achieve success. His relationships with other people matter a great deal, often to

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> the exclusion of technical and commercial considerations (Beishon, 1977, p. 308).

Remembering that the manager was drawn to the organization to fulfill his need for power rather than achievement, we must recognize that the basis for his decision making may not, indeed probably will not, be a dispassionate and rational search for the optimum solution to meeting his company's goals. Instead, he may very likely base his search for a decision on how it may enhance his power. As Zaleznik has stated, "The development of careers, particularly at high managerial and professional levels, depends on accumulation of power as the vehicle for transforming individual interests into activities which influence other people" (Zaleznik, 1978, p. 709). Note that the vehicle for career development was power, not achievement and proficiency. Although power can come from achievement and proficiency, it can also be acquired without them as evidenced by many not particularly talented people in high corporate and government positions. With these thoughts in mind let us consider the ways in which the middle manager performs his basic function, making decisions.

Again, drawing from the work of Beishon, we find that there are a number of basic steps involved in making a decision.

1. The prospect or possibility of a choice or decision situation arising has first to be recognized.
2. Possible courses of action must be enumerated or actions taken to discover what the alternative actions available are.
3. The outcomes of the various courses of possible action and the implications of these outcomes for the company, the man, and his colleagues must be postulated. The probabilities of the actual predicted outcomes occurring must be assessed. These outcomes may also involve estimates of the likely reactions of the other people to the outcomes, and this can lead to an examination of a complete decision tree, as in examining an opponent's likely reply to a chess move.
4. Reference has to be made to the value system against which the outcomes are judged.
5. When the above steps have yielded information, the actual decision can be taken (Beishon, 1977, p. 310).

Note that in Step 3 we see that the manager is not only considering the effect of actions upon the company, which is what he is supposed to do according to conventional managerial theory, but he is also considering what effect it will have on himself and his colleagues. In other words, how will the decision affect his power relations with others? He may very well be thinking, "If I agree to do this which will help John, he will owe me support for my proposal next week" or "Even though I have evidence that the boss' plan won't work, I'm not going to tell him and have him at me." Worse yet, he may think, "I know John's plan won't work because the components won't take the strain, but I'll let him fail in front of the boss and then offer my alternate plan which will work." Such decisions have as their end not the achievement of the company's goals, but rather the manager's need to enhance his power.

All humans are essentially information processors, but as can be seen above it is the manager more than anyone who does little else but process information. Successful decision-making requires that the appropriate information be available at each step in the decision-making process. Managers learn that making good decisions or avoiding being held responsible for bad decisions will be awarded more power by the organization. Therefore, the key to making the "correct" decisions for his career lies in having the appropriate information at the right time. Consequently, access to more and better information is the means whereby the manager can enhance his power. Greater access to information can be achieved through both formal and informal means.

In a formal sense the manager can insert himself into information flows through his own authority or by having a superior insert him into the flow. Since information is the very life blood of an organization, it is essential for the manager to be as well informed as possible. As stated by Hampton, Summer, and Weber concerning the work of Michels:

> Hierarchies become strong and organizations autocratic because it is impossible to keep everyone informed no matter how much the members may desire democracy. Only a few can monitor the necessary information flows and know enough about what is going on to participate in organizational decisions. Those few who occupy critical communication points accumulate expert power and emerge as leaders who make decisions that affect others (Hampton, Summer, & Weber, 1978, p. 71).

Thus, the manager will strive to be included in the formal flow of information even though much of it may not pertain to him directly. Although he may be denied access to information in the formal flow, many managers will also use informal means such as well-placed friends, secretarial contacts, and eavesdropping to acquire it.

As was stated earlier, managers are given a certain degree of power by the position awarded them by the company, but to develop their careers they must expand that power from its rather limited traditional basis which is inherent in the position to the more powerful base of expertise. To achieve this the manager must have knowledge which comes from years of experience or exclusive sources of information. Since it is quicker to accomplish the latter, the manager's primary goal is to gain and control access to information. In addition, almost all of the manager's competitors and supervisors are dependent upon the supply of information in making their own decisions; therefore, the manager who can control that information gains a great deal of power over them.

From the foregoing we can conclude that the typical middle manager will be motivated by a high need for

MID-SOUTH ECONOMY

BUREAU OF BUSINESS & ECONOMIC RESEARCH THE FOGELMAN COLLEGE OF BUSINESS AND ECONOMICS MEMPHIS STATE UNIVERSITY

STATISTICAL SUPPLEMENT

THE MID-SOUTH ECONOMY

U.S. economic recovery is now a year old. After back-to-back recessions in 1980 and 1981-82, the U.S. economy has expanded to the point where the level of non-agricultural payroll employment is near the pre-1980 recession level; and once the figures for the fourth quarter are in, 1983 should be above normal for the first year of recovery in terms of increased production, sales, and income.

While economic activity has out-distanced most economic analysts' expectations in 1983, the prospects of rising interest rates and continued high budget deficits, coupled with a deteriorating international trade position, have economic observers concerned that 1984 may get off to a shaky start. Meanwhile, on the positive side, continued strong productivity gains, increased manufacturing operating rates, and further gains in consumer real purchasing power due to low inflation may confound economic observers once again. The consensus forecast for 1984 is that real economic growth will moderate to 4.7 percent, versus the head-long pace of 6.3 percent in 1983, with the unemployment rate remaining in the 8.0 percent range. Inflation is anticipated to increase slightly to approximately 5.5 percent.

For the Mid-South states the growth in the civilian labor force has slowed, while total employment has increased. The Mid-South civilian labor force totaled 7,993,800 in October 1983, up only 0.9 percent from last October, while approximately 430,000 persons have been added to employment rolls since the beginning of the year. Sales tax collections have registered substantial gains in most Mid-South states, except Louisiana. For the year-to-date period, sales tax collections are up 5.8 percent over last year. Total deposits at Mid-South commercial banks increased 10.4 percent in October 1983 versus a year ago, outpacing the national gain of 9.2 percent.

Finally, the twenty-fifth anniversary issue of *American Medical News*, published by the American Medical Association, took a look back at some of the differences in medical care between 1958 and 1983. Highlights included: (1) the average net income after taxes for medical doctors was $16,000 in 1958 compared to $99,500 in 1983; (2) the average charge for office calls rose from $3.00 in 1958 to $18.50 in 1980; (3) per capita expenditures on health care rose from $146.30 in 1958 to $1,225.00 in 1983; and (4) hospital expenses per inpatient hospital day rose from $40.56 in 1958 to $215.75 in 1983.

LABOR

The total number of unemployed persons in the U.S. dropped below the 10.0 million mark in September 1983, causing the unadjusted unemployment rate to fall to 8.8 percent versus 9.7 percent last September. Manufacturing employment registered a seasonally adjusted increase of 1.6 percent, while non-manufacturing employment experienced a 1.3 percent gain from a year ago.

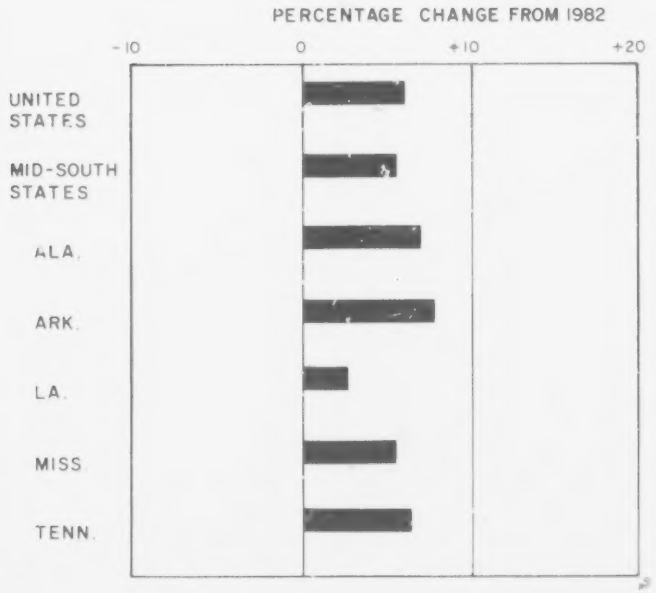
For the Mid-South states, the total number of unemployed persons totaled 849,700 in October 1983, a decline of 8.9 percent from last October. The aggregate unemployment rate stood at 10.6 percent in October 1983 versus an 11.7 percent rate last October. However, this was substantially above the 8.6 percent rate in October 1981. Manufacturing employment stood at 1,427,000 in October 1983, an increase of 35,300 over last October or 2.5 percent. Strong gains were experienced in Arkansas and Tennessee, up 6.5 and 5.1 percent, respectively. Louisiana was the only loser, down 3.5 percent from last October. Non-manufacturing employment dipped 0.5 percent from a year ago or some 26,000 jobs. Arkansas registered the best gain, up 1.0 percent over October 1982, while the rest of the Mid-South states remained virtually unchanged.

All of the Mid-South states, except Louisiana, registered solid gains in average weekly earnings for production workers, outperforming the national increase of 8.5 percent. In addition, all the Mid-South states outperformed the nation in registering gains in the average hourly pay of production workers.

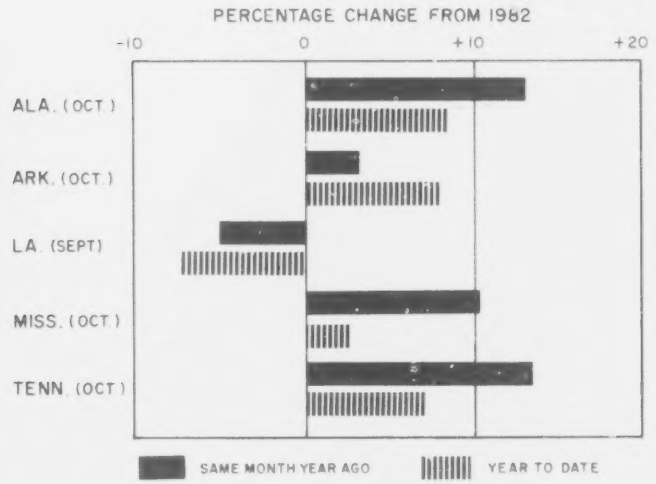
CONSTRUCTION

For the twelve-month period ending September 1983, the dollar value of building permits in the U.S. totaled $112.4 billion, an increase of 37.2 percent over the

PERSONAL INCOME - II QTR. 1983

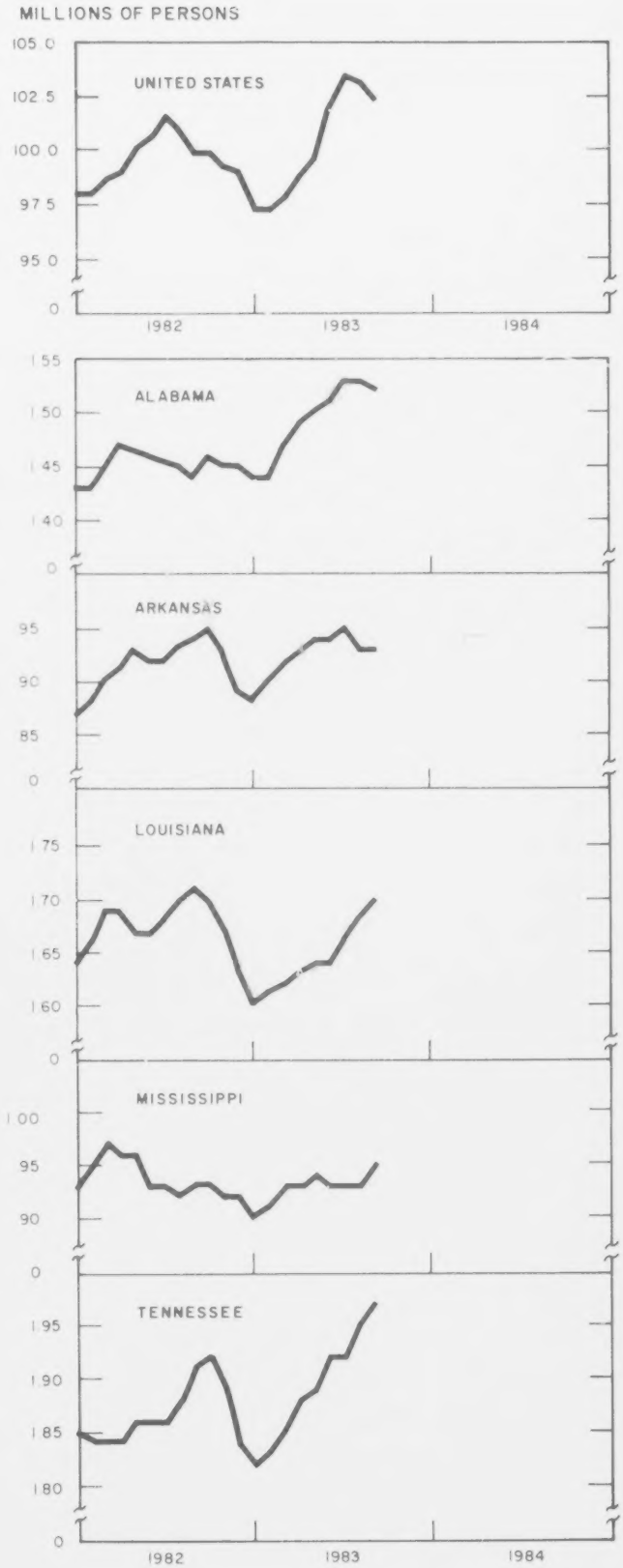


SALES TAX COLLECTIONS 1983



SOURCES: BUREAU OF ECONOMIC ANALYSIS
STATE DEPARTMENTS OF EMPLOYMENT SECURITY AND REVENUE.

TOTAL EMPLOYMENT



comparable period in 1982. Residential construction activity registered a healthy gain of 77.3 percent, while non-residential activity experienced a modest increase of 6.2 percent.

For the Mid-South states, excluding Arkansas, the dollar value of all building permits for the twelve-month period ending September 1983 totaled $5.2 billion, up 48.6 percent over the comparable 1982 period. The dollar value of residential permits totaled $2.6 billion, 91.2 percent higher than the comparable 1982 period. The number of dwelling units over the same period jumped 86.7 percent to total 81,400 units. Tennessee registered the best performance in the residential sector with a 136.2 percent increase in the dollar value of permits over 198[illegible] and a 114.1 percent increase in the number of dwelling units.

Non-residential activity totaled $2.5 billion for the twelve months ending September 1983, an increase of 21.2 percent. Louisiana turned in the best performance in this category, up 37.7 percent over 1982. The gains were registered in the offices, hospitals, and schools sectors.

Elsewhere, the National Association of Realtors' Housing Affordability Index stood at 82.4 in September 1983. What the index figure means is that a household earning the U.S. median family income of $24,383 had 82.4 percent of the income needed to qualify for the purchase of a median-priced existing home which cost $70,400 in September. The index, however, remains far below the 100 mark which was last reached in December 1978. The typical monthly principal and interest payment stood at $617 per month in September 1983 with a 12.86 percent average loan rate.

FINANCE

Commercial bank deposits in the Mid-South totaled $80.5 billion in October 1983, an increase of 10.4 percent from last October, outperforming the national increase of 9.2 percent. The component of savings deposits registered a healthy increase of 105.9 percent over a year ago, while time deposits experienced a 5.6 percent decline.

Mortgage lending activity by Mid-South savings and loans totaled $497.5 million in October 1983, up 150.6 percent from October 1982 levels. On a year-to-date basis, total mortgage lending activity totaled $4.9 billion as of October 1983, more than double the lending levels registered in the comparable 1982 period. Net savings flows are also registering substantial gains from their levels of a year ago.

LABOR [illegible]	United States	Mid-South States				
		Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Civilian Labor Force	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Percent Change Year Ago	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Unemployed	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Percent Change Year Ago	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Unemployment Rate						
1983	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1982	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Non-Agricultural Wage & Salary Employees	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Percent Change Year Ago	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Manufacturing Employment	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Percent Change Year Ago	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Non-Manufacturing Employment	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Percent Change Year Ago	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Average Weekly Earnings of Production Workers in Manufacturing	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Percent Change Year Ago	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Average Weekly Hours of Production Workers in Manufacturing	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Percent Change Year Ago	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Average Hourly Earnings of Production Workers in Manufacturing	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Percent Change Year Ago	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

*Seasonally adjusted.

Source: Departments of Employment Security and Survey of Current Business.

CONSTRUCTION[1]	September 1983	United States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Total Building							
Percent Change Year Ago		+37.2	+42.1	N.A.	+59.6	+58.9	+36.7
Residential Building							
Percent Change Year Ago		+77.3	+79.4	N.A.	+67.1	+87.0	+136.1
Non-Residential Building[2]							
Percent Change Year Ago		+ 6.2	+ 7.6	N.A.	+37.7	+13.8	+ 10.1
Total Dwelling Unit							
Percent Change Year Ago		+71.5	+88.1	N.A.	+71.2	+63.1	+114.1

[1]Twelve-month cumulative rate.

[2]Non-residential data exclude the cost of construction for publicly-owned buildings.

Source: The Federal Reserve Bank of Atlanta from data supplied by the Bureau of Census.

FINANCE 1983	United States	Mid-South States	Alabama	Arkansas	Louisiana	Mississippi	Tennessee
Member Banks as of 10/5/83 Percent Change from Comparable Date 1982							
Total Deposits	+ 9.2	+ 10.4	+ 9.5	+16.5	+ 8.9	+ 10.0	+ 11.2
Demand Deposits	+ 2.0	+ 0.6	+ 3.7	+ 4.0	- 2.5	+ 2.2	- 0.1
Time Deposits	- 15.2	- 5.6	- 6.6	+21.4	- 6.8	- 10.8	- 9.8
Savings Deposits	+126.4	+103.9	+98.2	+18.0	+115.8	+225.3	+131.5

Source: The Federal Reserve Bank of St. Louis and the Federal Reserve Bank of Atlanta.

SAVINGS AND LOAN ACTIVITY October 1983	Alabama	Arkansas	Louisiana	Mississippi	Tennessee[1]
Mortgage Loans Made (millions)	$ 55.1	$ 139.9	$181.0	$ 43.2	$ 78.1
Percent Change Year Ago	+176.5	+ 204.8	+ 98.5	+160.2	+ 214.4
Percent Change Year-to-Date	+271.2	+ 137.3	+146.7	+217.5	+ 181.9
Net Savings Flow (millions)[2]	$ 13.2	$ 24.4	$ 68.5	$ 3.0	$ 28.5
Percent Change Year Ago	+425.8	+ 227.1	+ 12.1	+130.9	+2404.8
Percent Change Year-to-Date	+322.6	+1186.7	+213.4	+188.4	+ 271.1

[1]Figures are for total loans made.

[2]Net savings flow equals new savings received plus dividends credited minus savings withdrawn.

Source: Federal Home Loan Banks of Little Rock, Cincinnati, and Atlanta.

TENNESSEE ECONOMY

Total non-agricultural employment in October 1983 increased by 29,900 persons over October 1982, an increase of 1.8 percent. Manufacturing employment registered a gain of 5.1 percent from a year ago. All sectors in the durable goods category registered gains from a year ago, with the best gains coming in the textiles, apparel, and printing/publishing sectors. In the non-manufacturing category, employment remained virtually unchanged from a year ago. However, solid employment gains were registered in the retail trade, services, and state/local government sectors. The unadjusted unemployment rate was 9.5 percent in October 1983, versus an 11.5 percent rate last October. The Tennessee Department of Employment Security also reported that the unemployment rate increased in fifty counties, decreased in thirty-eight counties, and remained unchanged in seven counties.

The Tennessee Department of Economic and Community Development reported that for the first nine months of 1983 manufacturing investment totaled $725.4 million, which exceeds the previous record high of $617.7 million set in 1980. A total of 12,359 new jobs will result from the 202 new and expansion industrial projects announced so far in 1983, the most new jobs recorded since quarterly reports began in 1976.

For the twelve-month period ending September 1983, the dollar value of non-residential building permits totaled $742.4 million, up 10.1 percent over the comparable 1982 period. Solid gains were registered in industrial, offices, and stores sectors. However, declines were experienced in the hospitals and schools sectors.

On the residential side, for the twelve-month period ending September 1983, the dollar value of permits totaled $933 million, up 136.2 percent over the comparable 1982 period. Single-family dwelling units totaled 13,226, up 100.0 percent from a year ago, with multi-family units increasing 129.0 percent to 14,223.

Commercial bank deposits in Tennessee for October 1983 registered an increase of 11.2 percent from last October. Demand deposits remained unchanged, with time deposits declining 9.8 percent. Savings deposits rose 131.5 percent from the level of a year ago.

Total deposits at Tennessee's savings and loans increased 11.6 percent, with NOW accounts registering a gain of 82.6 percent to total $210 million for October 1983. However, time deposits registered a decline of 2.5 percent. Total lending activity at Tennessee's savings and loans was $78.1 million in October 1983, up 214.4 percent from last October's level. For the year-to-date period, Tennessee's savings and loans lent $619.0 million compared to $219.5 million for the first ten months of 1982.

Tennessee's credit unions also registered solid gains with total deposits up 14.2 percent from last October, outperforming total deposit growth rates for both commercial banks and savings and loans. Share drafts managed a solid gain of 28.3 percent from their levels a year ago.

For the agricultural sector, continued drought conditions reduced prospects for Tennessee's crop production. The 1983 corn and soybean productions are, respectively, 52.9 and 48.6 percent below 1982 levels. Additionally, Tennessee's 1983 tobacco crop is 37.0 percent below 1982, while the cotton crop is expected to be 53.0 percent below last year—the second lowest production level on record. Also, harvested acres for winter wheat have declined from 935,000 in 1982 to an anticipated level of 630,000 for 1983. Meanwhile, the index of prices received for all farm products in Tennessee for October 1983 increased nine index points from last October to stand at 132.0 of its 1977 = 100.0 level. Crop prices have registered dramatic gains from a year ago, up some twenty-nine index points. However, livestock prices have dropped some ten index points to stand at 131.0 for October 1983.

power, will occupy a managerial position in a traditional bureaucratic business organization which emphasizes relationships between people, will seek to develop his career through accumulating more power to influence others, and will learn that the control of information is the quickest way to accumulate power.

The Effects of Power on Organizational Dynamics

As noted earlier, the typical business organization is a bureaucracy and, as such, assumes that managers of the organization will make decisions that further the goals of the organization. The problem with such rational models of decision making is that what is rational to one person may be viewed as irrational by another. Everyone has his own ideas about proper priorities in a just world. Thus, goals rather than being clearly defined and universally agreed upon become blurred and contested as they are distributed throughout the organization. If such is the case (and in large managerial firms it is almost universally the case), then decisions taken on behalf of the organization as a whole are likely to reflect the goals of those who prevail in political contests and have thus acquired the power in the organization. How is such power acquired and used? We have already seen some of the techniques used by individual managers to acquire power; in addition, there are certain organizational dynamics that dictate who gets power.

Salancik and Pfeffer (1977) argue that organizational power derives from what they call a strategic contingencies theory, which in summary means that as an organization grows, those subunits which can meet the critical needs of the organization to supply the demands of the environment it serves will realign the organization's structure through their ability to influence resource allocation. This realignment of the structure and resources keeps the organization in tune with its environment (Salancik & Pfeffer, 1977).

Power also seems to influence the selection of individuals to key leadership positions, which is another means of aligning the organization with the needs of the environment. In this context power can be the adaptive mechanism whereby an organization responds to the needs of its environment, but this is not always the case and is rarely the case for any given organization over time.

Implied in the strategic contingencies theory of power is the need for the organization to adjust its power bases in accordance with the needs of the environment *continually*. Salancik and Pfeffer point out an important contradiction in the use of organizational power. It is first derived from the contingencies facing an organization; but when these contingencies change, so do the bases for power. Thus, power should flow to the new bases, but power tends to be sticky. As we have just seen in our analysis of the middle manager, he is motivated by power and strives hard to acquire it; he will not give it up easily.

This leads to what Salancik and Pfeffer (1977) speak of as institutionalized forms of power, by which they mean the establishment of relatively permanent structures and policies that favor the influential subunit. Because of the power it holds due to the organization's critical need of its services, the influential subunit can construct rules, procedures, and information systems that limit the potential power of others while reinforcing its own. The ability to structure information systems is seen as an especially strong source of power, since those who have information are in a better position to interpret the organization's problems, and they will do so to their own advantage. This view is further corroborated by Mason and Mitroff who stated:

> All organizations have patterns of authority, task allocation schemes and degrees of centralization (or decentralization) of decisions that influence the collection, processing, and flow of data. Welinsky has shown that hierarchy, specialization, and centralization tend to create "information pathologies" (e.g., secrecy, blockage, withholding information, leaks, distortions, etc.) in an organization (Mason & Mitroff, 1973, p. 480).

Since managers are well aware of the role information plays in the maintenance of power, the information flow throughout the firm will reflect the structural distortions which they have created. In addition to distorting the information flow, the managers will, over time, progressively constrict and pollute the information to meet their own needs rather than those of the organization as a whole.

The combination of the power-motivated manager and the characteristics of the rational bureaucratic business organization which allow the unchecked exercise of power seems to spell the inevitable stagnation and decay of all such organizations. Salancik and Pfeffer (1977) note, however, that power is not the dirty business it is often made out to be because it is one of the few mechanisms for reality testing in the organization. The cleaner forms of power, the institutionalized ones, rather than having the virtues they are often credited with are, in fact, the very factors which can lead the organization to become unresponsive to the changing environment. They go on to state:

> The real trick to managing power in organizations is to ensure somehow that leaders cannot be unaware of the realities of their environments and cannot avoid changing to deal with these realities . . . . One conclusion you can, and probably should, derive from our discussion is that power—because of the way it is used—will always result in the organization suboptimizing its performance (Salancik & Pfeffer, 1977, p. 20).

Since power is both a motivating force in the manager and a factor in organizational dynamics, it is probably the most significant force in the distortion of organizational structure.

Summary and Implications

One must conclude that an individual who seeks and obtains a managerial position has a basic desire or need for power. In order to maintain power, and in most instances increase it, the manager's decision-making behavior will be affected. This means that at times the middle manager may have a decision to make that puts his personal goals in conflict with the goals of the organization. When this occurs, the manager often does not follow the ideal or "rational" approach to making decisions. Obviously, not all decisions could be made in an irrational manner or the objective of maintaining and increasing power would not be attainable for the manager.

A factor which ultimately affects the decision-making process is the quality of information available to the manager. One should note that access to "exclusive" information contributes to the personal need to maintain and enhance the middle manager's power.

This does not mean power is the only thing that motivates middle managers, but it is meaningful to consider the effects that the need for power have on the middle manager's behavior as he must solve the conflict between personal and organizational goals for the long-term survival of both. In order to accommodate the needs of both, it is necessary that organizations recognize the potential conflicts they may be creating and then take the steps necessary to minimize the negative impacts. The first and most fundamental step is the open recognition by management of the games allowed within organizations to enhance personal self-esteem and those which are actually encouraged by the management system. The culture of the organization too often contains a lengthy series of acceptable managerial practices which, when exposed to the objective light of day, result in organizations achieving less than their potential. One of the most valid criticisms of American businesses has been based on their fixation with short-run performance at the cost of long-run success. In rapidly growing organizations you can outrun your managerial sins. Short-run organizational performance increases personal power and prestige and heightens the probability of promotion. In a world of international competition for markets, we must ask ourselves if we have allowed the expediency and pleasure of organizational combat to endanger our future competitive position. Organizational survival demands that we review managerial behaviors of the past to determine if they are acceptable now and in the future.

REFERENCES

Beishon, R. J. "Information Flow and Manager's Decisions," in T. V. Dock, U. P. Luchsinger, and W. R. Cornette (Eds.), *MIS: A Managerial Perspective*. Chicago: Science Research Associates, 1977, pp. 306-313.

Dock, T. V.; Luchsinger, U. P.; and Cornette, W. R. (Eds.). *MIS: A Managerial Perspective*. Chicago: Science Research Associates, 1977.

Ein-Dor, P., and Segev, E. "Organizational Context and the Success of Management Information Systems," *Management Science*, Vol. 24, No. 10, June, 1978, pp. 1064-1077.

Hampton, D. R.; Summer, C. E.; and Weber, R. A. *Organizational Behavior and the Practice of Management*. Glenview, Illinois: Scott, Foresman and Company, 1978.

McClelland, D. C. "The Two Faces of Power," *Journal of International Affairs*, Vol. 24, No. 1, 1970, pp. 29-47.

Mason, R. O., and Mitroff, I. I. "A Program for Research on Management Information Systems," *Management Science*, Vol. 19, No. 5, January, 1973, pp. 475-485.

Monsen, J. R., Jr., and Downs, A. "A Theory of Large Management Firms," in D. E. Summer, J. J. O'Connell, and N. S. Perry, Jr., *The Managerial Mind*. Homewood, Illinois: Richard D. Irwin, Inc., 1977, pp. 447-450.

Salancik, G. R., and Pfeffer, J. "Who Gets Power - and How They Hold On to It: A Strategic - Contingency Model of Power," *Organizational Dynamics*, Vol. 5, No. 3, Winter, 1977, pp. 2-21.

Summer, D. E.; O'Connell, J. J.; and Perry, N. S., Jr. *The Managerial Mind*. Homewood, Illinois: Richard D. Irwin, Inc., 1977.

Tomeski, E. A. "Building Human Factors Into Computer Applications: The Computer Profession Must Overcome a 'Jackass Fallacy,'" in T. V. Dock, U. P. Luchsinger, and W. R. Cornette (Eds.), *MIS: A Managerial Perspective*. Chicago: Science Research Associates, 1977, pp. 280-287.

Zaleznik, A. "Power and Politics in Organizational Life," in D. R. Hampton, C. E. Summer, and R. A. Weber, *Organizational Behavior and the Practice of Management*. Glenview, Illinois: Scott, Foresman and Company, 1978, pp. 708-724.

ATTORNEYS AND EXPERT FINANCIAL WITNESSES

*Linda M. Marquis and Virginia M. Moore**

Attorneys frequently draw from the professional community and the ranks of academia in providing expert witnesses for the defense and prosecution of various legal cases. Accountants and economists, as well as professors from colleges, have been called upon to testify in many matters where expert financial testimony is required.

One area of concern is the need of the legal profession for competent, expert witnesses in the financial area. Lawyers and corporations are searching for business professors with specialized research interests who are willing to testify in complex legal cases (Bellew, 1981). Legal journals are beginning to carry articles dealing with using experts in financial, technical areas (Drossman, 1982; Benkin, 1979; Finfrock & Spradlin, 1978; *Insurance Counsel Journal*, 1976; Meckler, 1980; Stotsenberg, 1980). Unfortunately, economists, accountants, and other financial experts have not expended much effort in educating the legal and financial community in the role of the expert (Wright, 1977, 1980).

The purpose of this research was to determine how attorneys use expert financial witnesses and how lawyers select the types of experts needed for their cases.

When cases involve potentially huge settlements or well-known, well-publicized names, attorneys are apt to choose equally well-known financial witnesses. But a far larger number of cases involve less interesting facts and small settlements resulting in the selection of more localized expert witnesses. What the current literature does not indicate is an adequate match between the attorney's needs in these situations and the financial witness' expertise. In order to determine if attorneys are fully aware of the areas of expertise and take advantage of these experts, a study of this area was undertaken. Specifically, this project provides some preliminary answers to the following questions: In what kinds of cases does the attorney use expert financial witnesses? Does the attorney use different expert witnesses for different types of cases? What does the attorney look for in selecting (and continuing to use) an expert financial witness? What types of financial backgrounds would the attorney desire in his expert witnesses? What can the expert expect to be paid for his services? Is it more likely that an expert financial witness will be used by the attorney for the plaintiff or the defendant? Is use of an expert financial witness related to the attorney's length of time in practice, form of practice, size of practice, or size of community?

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Methodology

A pretest questionnaire was administered to a small group of attorneys. Necessary adjustments to the questionnaire were made before conducting the actual survey. A random sample survey was made of the Tennessee Trial Lawyers Association and the Tennessee Defense Lawyers Association. The membership lists of these two organizations were merged, and any attorneys holding dual memberships were included in the population count only once.

The questionnaire consisted of two sections. Section I related to the attorney's professional background and demographic variables. Particularly relevant was the type of practice, the percentage of the attorney's practice in the various areas, and the experience with expert witnesses. Additionally, the form of practice, number of partners, size of community, and length of time in practice were questioned.

Section II of the questionnaire involved the attorney's use of expert financial witnesses. These questions were predominantly information questions, although some of the areas tapped attitudes and opinions. An inquiry was made into the lawyer's use of experts on behalf of either the plaintiff or the defendant for either trial preparation or actual courtroom testimony. The attorneys were given a choice of the type of case for which they most frequently used expert witnesses. They were also given a choice as to the types of experts they most often used as expert witnesses. Finally, the survey queried the characteristics initially used in selecting an expert witness and the characteristics considered in continuing to use the expert witness. The remaining questions dealt with the fees charged by the expert witnesses and how the attorneys located the expert witnesses.

Although the questionnaire was designed with specific response choices, the attorneys were given the opportunity to add other choices and to include any relevant comments or experiences.

One hundred fifty-three usable responses were received, resulting in a response rate from the two mailings of 48.0 percent. One hundred and twenty-nine usable responses

came from members of the Trial Lawyers Association, and 24 usable responses came from the Defense Lawyers Association. The difference in response rates between the organizations was not significant.

Table 1 shows demographic information on the respondents. This total of data on demographics was also broken down by organization (i.e., Trial Lawyers Association and Defense Lawyers Association) and by response to whether or not the attorney utilized expert witnesses.

Table 1
DEMOGRAPHIC PROFILE OF RESPONDENTS

Characteristics	Percent Who Use Expert Witnesses	Percent Who Do Not Use Expert Witnesses
Membership		
Trial Lawyers Association	83.3	85.7
Defense Lawyers Association	16.7	14.3
Time in Practice		
Less than 6 years	26.7	50.8
6 to 10 years	22.2	12.7
Over 10 years	51.1	36.5
Form of Practice		
Sole practitioner	14.4	24.1
Few partners	71.1	55.2
Large firms	14.5	20.7
Size of Practice		
Under 5 partners	59.2	57.8
5 to 10 partners	26.3	13.3
Over 10 partners	14.5	28.9
Size of Community		
Under 20,000	21.6	25.9
20,000 to 100,000	28.4	19.0
Over 100,000	50.0	55.1
Total Population	58.8	41.2

Results

Who Uses Witnesses?

Familiarity with the legal profession led to the speculation that trial lawyers would be more likely to use expert financial witnesses than would defense lawyers. In a case requiring "fact" testimony, if the plaintiff's attorney had used an expert financial witne and if the facts on which the expert's testimony were based were correct, then a defense lawyer could do little damage by way of rebuttal with any other expert financial witness. In cases involving "opinion" testimony, a search for an expert with a specified point of view could provide testimony to rebut the opposition. A one-sample chi-square showed no significant difference between the percentage of trial lawyers using expert financial witnesses and the percentage of defense lawyers using expert financial witnesses.

Attorneys who had practiced law for more than five years were anticipated to be more likely to have used expert financial witnesses. These attorneys would have had time to encounter a greater variety of cases and also gain enough experience to know how to use an expert financial witness. The chi-square statistic showed a significant difference between the time in practice and the usage of expert financial witnesses, i.e., the attorneys with more years of experience were the ones who used expert testimony.

The business form that the attorney chose to use for his practice was hypothesized to have no effect on the likelihood of using expert witnesses. Surprisingly, the differences in forms were significant. However, the form of the practice may be related to the number of partners. The size of the practice (in terms of numbers of partners) was significant in the relative use of expert financial witnesses. As expected, those who practiced with many partners were less likely to have used expert witnesses than those who practiced in small partnerships. This is probably due to the degree of specialization evident in larger law firms that does not exist in smaller organizations.

Finally, the size of the community was hypothesized to have no impact on the likelihood of using expert witnesses. The chi-square statistic showed no significant difference between the behavior of attorneys in large cities and those in more rural locations.

When Experts Are Used

The lawyers who responded that they did use expert financial witnesses were asked how often they used these expert witnesses on behalf of the plaintiff and on behalf of the defendant. The difference in the relative frequency of using expert witnesses for the plaintiff and for the defendant was significant.

However, in contrast, trial lawyers apparently use expert financial witnesses on behalf of the plaintiff (or defendant) as frequently as defense lawyers use expert witnesses on behalf of the plaintiff (or defendant).

Based upon experience with the legal profession, expert witnesses were thought to be used frequently for trial preparation. Many cases are settled before they go to court, and, thus, expert financial witnesses may often supply reports but never actually testify. However, in the attorneys surveyed, no significant difference existed between the usage of expert witnesses for trial preparation and the use of expert witnesses in court.

Criteria for Selection of Witnesses

Characteristics of expert witnesses were an important consideration. Two time frames were used: initial selection of an expert financial witness and the continued usage of the expert financial witness. Courtroom presence and experience in the area ranked extremely high initially, with professional certification a close third. In continuing to use an expert witness, though, attorneys look at the courtroom presence or demeanor of the witness. Attorneys who did not consider courtroom presence as a factor initially were likely to consider this a major factor if they chose to continue to use the witness.

Attorneys who considered the witness' experience in the financial area, his professional experience, or his past

witnessing experience as important factors in selecting an expert witness initially were not likely to consider these factors when determining whether to use this witness for other cases.

Kinds of Cases and Experts

The attorneys surveyed were asked to rank the types of cases for which they used expert financial witnesses. The frequency of the various responses is shown in Table 2. The predominant cases were wrongful death and permanent personal injury. Insurance losses and divorce settlements were the third and fourth choices of the attorneys.

Table 2
TYPES OF CASES

	Attorneys' First Choice		Attorneys' First Three Choices	
Type of Case	Frequency	Percent	Frequency	Percent
Permanent Personal Injury	39	38.5	66	29.8
Wrongful Death	36	35.6	65	29.4
Insurance Losses	7	6.9	28	12.7
Divorce	4	4.0	23	10.4
Tax	4	4.0	4	1.8
Corporate	3	3.0	12	5.4
Bankruptcy	2	2.0	3	1.4
Estate Settlements	1	1.0	7	3.2
Partnership Dissolutions	1	1.0	6	2.7
Other	4	4.0	7	3.2

Since economists are likely to speculate on the economic losses of wrongful death and permanent personal injury cases, the results to the question concerning the types of individuals used as expert witnesses were not surprising. The overwhelming selection was professors of economics. The second choice was Certified Public Accountants. Table 3 illustrates the types of individuals selected as expert financial witnesses.

Table 3
TYPES OF FINANCIAL EXPERTS

	Attorneys' First Choice		Attorneys' First Three Choices	
Types of Witnesses	Frequency	Percent	Frequency	Percent
Professors of Economics	42	46.2	56	27.8
CPAs, Practicing Accountants	29	31.8	55	27.4
Professors of Accounting	6	6.6	16	8.0
Industry (or Government) Economists	5	5.5	24	11.9
Professors of Business or Finance	5	5.5	25	12.4
Financial Analysts	3	3.3	9	4.5
Non-CPAs, Practicing Accountants	0	0	11	5.5
Others	1	1.1	5	2.5

The type of case for which an attorney used expert financial witnesses would seem to imply the profession of the witness selected by the attorney. However, the individual attorney did not perceive this distinction in his answers to the queries on the types of cases and kinds of experts.

Locating expert financial witnesses was primarily accomplished through communications with other attorneys. Table 4 shows the relative frequency of the responses to how the attorneys found expert witnesses.

Table 4
HOW ATTORNEYS LOCATE EXPERTS IN FINANCIAL AREAS

	Frequency	Percent
Social Connections	13	9.3
Professional Organizations	26	18.6
Colleges or Universities	38	27.1
Other Attorneys	56	40.0
Other	7	5.0

One of the final questions dealt with the expected charge for the services of an expert witness. Eighty-two (82.0) percent of the respondents indicated they expected the expert witness to charge by the hour rather than a fixed amount. Expected rates ranged from $20 per hour to $100 per hour, with the average at $40-$45 per hour.

Limitations

Although the response rate to this survey was relatively high, the implications must be viewed in the proper perspective. A statistical test for non-response bias indicated that non-respondents probably did not use expert financial witnesses. Thus, the number of attorneys using expert financial witnesses may be significantly different (probably lower) than the percentage shown in this survey.

Additionally, this survey was sent only to members of the Tennessee Trial Lawyers Association and of the Tennessee Defense Lawyers Association. In attempting to contact specifically the attorneys likely to use expert financial witnesses, many other attorneys were omitted. However, a survey of the Tennessee Bar Association would likely have reached a great number of lawyers who have had no need for the services of financial experts.

Conclusions

One of the anticipated results was that expert financial witnesses would be used less frequently on behalf of the defendant than of the plaintiff. The survey results were in basic agreement with this statement. A number of reasons could account for this situation: defendants' cases may be so weak that an expert witness cannot be found to support the defense contentions; or, any expert would arrive at the same conclusion based on the facts of the case.

Fortunately, one factor was discounted by this study. Members of the Defense Lawyers Association were no less likely to use expert financial witnesses than members of the Trial Lawyers Association. Thus, if expert financial witnesses are not used in the defense of a case, the attorney's lack of knowledge about expert financial witnesses does not appear to be a factor. The members of the legal profession who practice in the courtroom are informed about the possibility of expert financial testi-

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BANK DEREGULATION OR REREGULATION?

*Wayne Pyeatt**

After a half-century during which the nation's bankers concerned themselves with the growth of the liability side of their ledgers, deregulation has suddenly focused their attention upon the asset side. With few exceptions, deposit accounts in banks may earn any amount of interest for any period of time the bank deems appropriate.

The objectives of such deregulation appear to be at least twofold. The small depositor, at least in theory, may earn the same rate of interest on his comparatively few dollars as the one who is able to plunk down $100,000. Deregulation is also an attempt to further "level the playing field," which refers to the fact that many financial services companies compete with each other for the corporate or consumer dollar but operate under somewhat different laws and regulations. Managements of larger banks have long urged that those laws and regulations which have penalized banks be changed so that the "playing field" will be level and fair to all. There is little doubt that deregulation will, in fact, accomplish to some degree each of the objectives; however, very real questions are raised about the players on the "playing field."

There has been little real concern about the management of the more than 14,000 banks in this country for many, many years. With government regulators telling banks what interest they could pay on what kind of deposits and at the same time regulating the types, amounts, and total loan and investment portfolios, much of the management risk was removed. Any manager who did not closely follow the rules was chastised and perhaps removed from the banking scene. Few banks failed between 1940 and 1980—so few that the failure of any bank, no matter how small, was likely to make national news.

Then came the seventies with high interest rates, double-digit inflation, and the gradual relaxation of government regulation. This period also brought record applications for the formation of bank holding companies, which rather quickly moved toward the entrance into non-banking fields, an action intended to partially level the "playing field." Bank stocks, never very popular or widely traded, were listed on stock exchanges; and the race for industry control, market share, and profits was on. Since October 1, 1983, when the great majority of interest regulation was removed, the race course has had no fences.

Deregulation is supposed to bring more profits and/or greater market share to the aggressive, creative bank, which it surely may do. It also, for the first time in a couple of generations, gives all banks "the right to fail," as stated by one bank examiner.

Those who are steeped in the concept that pure competition is the answer to problems within the industry look forward to the race. Some, however, are having second thoughts about their new-found freedom to (1) be able to attract deposits almost overnight by paying well above market rates and (2) enter fields long barred to bankers, particularly those having to do with common stocks and real estate development. Underwriting of revenue bonds and insurance is not yet approved, but great pressure is being placed on Congress by bankers for such approval. Certainly, banks are now able to structure loan portfolios to include those that would have been suspect 20 years ago.

Banks do have the right to fail, and even the most avid supporters of deregulation agree that many will fail. Perhaps there are far too many banks in this country. Fourteen thousand is a very large number, particularly when most countries in the free world have perhaps fewer than 50. The problem, of course, is *which banks* are going to fail. It is one thing for a small bank in Tennessee to close its doors, usually reopening the next day after a change of name. It is quite another thing to consider the failure of a major city bank with billions of dollars of deposits at risk. Yet each one of these banks is counted as one of the 14,000.

It appears that the financial community in general and banks in particular are beginning the race, and the race is not likely to stop very soon. There are very good reasons why the race should not cease; however, it is possible that the pace may slow considerably.

There is a major problem confronting banks, government, and, if not addressed rather quickly, citizens. At this time, all banks, large and small, rural and urban, well or poorly managed, have precisely the same deposit insurance coverage and, in fact, pay the same premium for such coverage. This means that an inept or unprincipled manager may, almost overnight, attract exceptionally large deposit increases simply by paying a better interest rate. He then may invest in high yielding, very risky loans or securities in order to get the interest rate spread he must have to remain profitable. Actions of this sort can occur very rapidly before any regulatory agency learns of or can act to prevent or to counter such moves. It would seem that

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such an opportunity would be perfectly suited to the interest of organized crime. Just the ability to attract millions of dollars overnight seems, perhaps, to be inherently dangerous. Yet the FDIC insures those depositors exactly the same and for the same price as those in a competing bank in the same town, a bank which runs its affairs in a reasonable fashion.

The problem is complex. First, how badly hurt is the well-run bank going to be during the time its competition is taking its deposits? Can the bank survive the loss of a substantial part of its deposits even for a limited time? Or, will the bank be forced to meet its competitors' rates? Competition is the life blood of capitalism, but one must remember the ramifications of this kind of unbridled competition. It has many more far reaching effects than a sale on tires.

Second, considering the creative treatment of the ownership of the $100,000 accounts, how much money could one family have in one bank and be assured of deposit insurance coverage? We know that a husband and wife can have accounts insured for $200,000 by using separate accounts. Could it be $400,000? Some believe so. When children are involved, the total per family is certainly several times the $100,000 FDIC limit. Why is that important? It means that money in substantial amounts will follow the highest rate without fear of loss.

Third, the use of money brokers has compounded the problem. Brokers are not concerned about bank safety and stability so long as deposit insurance is in force. They simply limit all deposits for their customers to $100,000 or less per bank. Pension funds may place millions of dollars in such accounts in a single bank without concern for insurance limits, a fact not well known. So long as the name of the potential pensioner is furnished, each account within the fund is insured up to $100,000 in a *single bank*. Those funds involving thousands of accounts could conceivably deposit several million dollars in a single small bank, which at the time of deposit could be on the brink of failure, yet such deposits would be fully insured. J. Charles Partee, member of the Board of Governors of the Federal Reserve System speaking before the House of Representatives Subcommittee on Financial Institutions, Supervision and Regulation, and Insurance on October 27, 1983, addressed the problem. Speaking of deposit brokering, he agreed that some basic problems exist—ones that could undermine market discipline associated with risk, therefore increasing potential calls on the funds of deposit insurance agencies. He suggested registration and regulation of money brokers, but he recognized the possibility of substantial problems in the event of the use of brokered deposits by troubled institutions (perhaps referring to the recent failure of the First National Bank of Midland, Texas). Apparently that bank failed less due to bad loans, although there were many, than to a liquidity crisis. This crisis occurred due to a liquidity insolvency brought on by the borrowing of nearly $500,000,000 from other banks or from deposits brokered through Merrill Lynch. When problems surfaced in September 1982, depositors began a quiet run on the bank. From the end of 1982 until it closed in early October 1983, the bank had deposit outflows of $813,000,000. Governor Partee suggests the problem will be solved by the requirement in effect since September 30, 1983, that all banks report quarterly the volume of deposits obtained through brokers. Whether such reports would be made in time for proper action on the part of the regulatory authorities may be open to question.

These concerns are real and are facing the industry now. There have appeared recently certain rumblings in Washington. The various supervisory agencies express apprehension with regard to money brokers. The FDIC is less than happy about its present inability to have authority when decisions are made concerning the entrance of banks and holding companies into non-banking fields. Recent comments by Allan Greenspan indicate the feeling that FDIC and FSLIC insurance as presently structured provides subsidies to the banks and thrifts and, in reality, gives them the right to issue government-guaranteed paper in essentially unlimited amounts. Paul Volker, Chairman of the Board of Governors of the Federal Reserve System, has made clear his support for action that would declare a moratorium on all further deregulation of access by others into the traditional banking field and, of course, the further access of banks into non-bank related areas. In a statement before the Senate Committee on Banking, Housing, and Urban Affairs on September 13, 1983, he indicated his concern about the need to maintain confidence in the basic payments system and the need for continuing attention to the safety and soundness of banks. He said, ". . . when soundness, confidence, and continuity in the provision of money and payments services are at stake, deregulaton alone cannot achieve the objectives because some degree of government regulation is implicit. The creation of the Federal Reserve and the FDIC and, more recently, our shared concern about the need for more intensified supervision of international banking are obvious cases in point." Later, in the same speech, he referred to the unique role performed by depository institutions and the concern felt by government as a lender of last resort (the Federal Reserve and the Federal Home Loan Bank) and as an insurer of deposits. He also questioned whether a depository institution can be wholly insulated from the fortunes of its affiliates.

Dr. Murray Weidenbaum, former chairman of the Council of Economic Advisors, when questioned about bank deregulation and the future during a recent visit to Memphis State University, said, "I much prefer to speak of regulatory reform."

The concern is not yet broad nor deep. The general public is not well informed and does not understand that inattention will finally add further burdens to them in the long run. On the other hand, many bankers are realizing that if deregulation continues as planned they may be forced to face (1) public scrutiny of their loan and investment portfolios, a measure supported by Chairman William Isaac of the FDIC (*Wall Street Journal*, p. 34, December 8, 1982); (2) sharp increases in capital funds and reserve requirements required by supervisory authori-

ties; over seven billion dollars in new capital had been raised by banks alone by late October 1983; (3) a major change in the way the FDIC insures accounts for individuals and/or the cost of the insurance to the individual banks.

It is possible that "deregulation" has become "regulatory reform" and is on its way to "reregulation."

(Continued from page 17)

mony, and the use of an expert witness is not related to the tendency of the lawyer to represent either plaintiffs or defendants.

An important area of concern to the legal community did become apparent in the statistical analysis of the questionnaire survey. No clearcut distinction appeared between the types of cases in which an attorney would use an expert financial witness and the kinds of witnesses that the attorney was likely to select. In general, a match occurred between the legal cases and the experts employed. However, on an individual basis, no such link was found. Within the financial community the lines of differentiation among the professions are well drawn. The lawyers surveyed did not seem to perceive these distinctions among the qualifications of the various experts.

This study indicated the need for liaison between the financial world (particularly accountants and economists) and the legal community. Initially, attorneys need some background on the various financial occupations and the differences among the financial experts.

Lawyers must also be informed about possible sources for finding the expert and how to use that expert most efficiently. Apparently many attorneys are ignoring (or using inappropriately) a relatively inexpensive device to help prepare and try even the most mundane cases.

REFERENCES

Bellew, Patricia. "Corporations Regard Business Professors as Good Investments." *Lexington Herald-Leader*, September 6, 1981, B8.

Benkin, Isaac D. "Is It Bigger Than a Breadbox?—An Administrative Law Judge Looks at Cross-Examination of Experts." *Air Force Law Review*, 21:364-375, 1979.

Drossman, Ken R. "Accounting Firms' Services to Lawyers." *American Bar Association Journal*, 68: 1392-1396, November, 1982.

Finfrock, Wallace P., and Bobby C. Spradlin. "How to Organize and Present Statistical Evidence." *The Practical Lawyer*, 24:67-76, June, 1979.

"Economist's Testimony Program Transcript." *Insurance Counsel Journal*, July, 1976, 392-408.

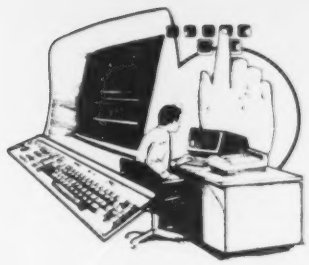
Meckler, Milton. "Complex Litigation: Effective Use of the Technical Expert." *Trial*, 16:37-39, August, 1980.

Stotsenberg, Harry. "Advice to Lawyer on Using the CPA in Litigation." *Orange County Bar Journal*, 7:52-55, Summer, 1980.

Wright, Howard W. "Forensic Accounting - It's Debatable." *Financial Executive*, 45:16-22, February, 1977.

Wright, Howard W. "How to Be An Expert Witness." *The Practical Accountant*, May/June, 1978, 73-80.

THE COMPUTER CENTER



by Peter L. McMickle, Ph.D., C.P.A.

COMPUTERIZED TAX BENEFITS

Uncle Sam can help defray the cost of a personal computer through income tax benefits. These benefits are in the form of reduced taxes through tax credits and deductions. However, determining the eligibility and exact amount of this help is somewhat complicated.

Eligibility

In order for the costs of a personal computer and related equipment and supplies to be qualified for tax benefits, the purchase must be wholly or in-part:

(1) A business related expense,
(2) A tax preparation expense, or
(3) An eligible education expense.

The computer purchase may actually be a combination of several of these deductible categories plus other non-deductible personal costs.

Business Expenses

Business expenses are expenses incurred in connection with earning or, in some cases, attempting to earn taxable income from a trade, business, or income-producing activity. Business expenses can be incurred by *both* owners and employees. The expense may be currently deductible or depreciable over time and may also be eligible for an investment tax credit.

The IRS will be concerned with how much of the computer cost is actually business or job-related. For example, a taxpayer might use his personal computer for:

(1) Report writing	25%
(2) Analyses	20%
(3) Personal budgeting	10%
(4) Self improvement	15%
(5) Entertainment	10%
(6) Daughter's homework	20%

If the report writing and analyses were job-related, then 45% (25% + 20%) of his computer costs would be eligible for tax benefits. The remaining 55% would not be eligible.

If he also used his computer in a part-time business capacity or for investment analysis, those portions of the costs would also be eligible for tax benefits. However, these benefits would apply only if the undertaking was truly for profit. The IRS applies a rule of thumb that a business must earn a profit in at least two out of every five years to avoid consideration as a hobby business. Expenses incurred from a hobby are deductible only up to the amount of any related revenue.

Tax Preparation Expenses

A personal computer might also be used to assist in income tax preparation. It could even assist in defense of a tax audit. All such tax-related expenses are deductible, including a portion of the original cost of the computer and any tax-related software and supplies.

Eligible Education Expenses

The deduction for educational-related expenses is quite restrictive. Basically, educational costs which aid an individual in his *current* occupation are deductible, but costs which prepare him for a *new* occupation are not. Thus, the ordinary education costs for obtaining the first job are not deductible nor are the educational costs associated with job advancement. For example, a taxpayer can usually deduct continuing education costs, including related computer costs. However, any educational costs associated with a change of profession or discipline, such as from Psychology to Computer Science, would generally not be deductible.

How Much is Eligible

Ideally, 100% of all related computer costs will be eligible for tax benefits. From a practical standpoint, such a claim will stand up only if the computer is used exclusively for eligible activities and if this can be proven by documentation, such as a computer time log. A

computer used exclusively at work would be easier to justify for tax benefit purposes than would be one used at home. In any case, the taxpayer should be prepared to support with proof a claim of high eligibility.

Calculating the Tax Benefit

The three basic tax benefits that can apply to computer-related purchases are:

(1) Expense deductions,
(2) Depreciation deductions, and
(3) Investment tax credits.

The last couple of "Tax Simplification Acts" have made tax return preparation more complicated than ever before. Now the three basic benefits are interrelated, and if you take one, you may not be able to take some or all of another. Also, exactly where these items are listed on a tax return varies with the nature of the expenditure and the employment status of the taxpayer.

Expense Deductions

A taxpayer can currently deduct those eligible expenditures that are actually consumed in the tax year. Computer-related costs that could be fully deducted in the year of purchase include:

(1) Dues to computer organizations
(2) Subscriptions to computer periodicals
(3) Equipment covers
(4) Information utility fees
(5) Floppy disks
(6) Related telephone expenses
(7) Related power costs
(8) Equipment insurance
(9) Repair costs
(10) Books useful for a year or less
(11) Business software useful for a year or less
(12) Any related expenditure of short-term benefit

If the computer is set up in a room in the home used exclusively on a regular basis as a principal place of business, related household expenses and depreciation on the house may also be deductible. University personnel would normally qualify for home office deductions only if they had a secondary business activity operated out of their home and met other tests.

For items that will be used for a number of years, there are two options: expense currently or depreciate over time.

Expensing Option

Computer-related purchases subject to expensing and/or depreciation are those items with a useful life of over a year. These include:

(1) Computer
(2) Disk drives
(3) Printer
(4) Cables
(5) Modem
(6) Stand
(7) Business software
(8) Books and manuals
(9) Any expenditure of long-term benefit

Starting in 1982, taxpayers could deduct expenditures for three-year and five-year property up to a stated maximum. The amount of this maxmum deduction is:

1982 ..... $5,000
1983 ..... $5,000
1984 ..... $7,500
1985 ..... $7,500
1986 on $10,000

The disadvantage of this option is the entire loss of any related investment tax credit on the amounts expensed. Purchases that exceed the amount of the expense deduction would still be eligible for an investment credit and depreciation deduction as described below.

Depreciation Deduction

If the expensing option is not chosen or if a portion of the purchase exceeds the expensing option maximum, qualified expenditures that apply to more than one tax year can be "depreciated." Since the expensing option is limited to between $5,000 to $10,000 depending on the tax year, any long-term expenditures over this maximum would have to be depreciated in order to be deductible.

Two choices have to be made concerning depreciation of computer-related items:

(1) Three-year vs. five-year property
(2) Accelerated vs. straight-line depreciation

Three-year vs. Five-year Property

Normally, computer purchases of hardware, software, and related equipment are classified by law as five-year personal property. However, a computer purchase may be classified as three-year property if it is used for "research and experimentation." The IRS interprets this in the strict experimental or laboratory sense. "Literary, historical, or similar projects" would not qualify for the three-year property classification.

The three-year classification will result in earlier deductions. However, if an individual expects his marginal tax bracket to rise significantly in the fourth and fifth year of the purchase, then it might be more advantageous to choose the five-year option. Also, classification as three-year property reduces the applicable investment credit from 10% to 6%.

Choice of Depreciation Methods

The ACRS accelerated depreciation method will result in a faster write-off than straight-line and normally would be the best choice. If an individual expected his marginal tax bracket to rise significantly in future years, then straight-line might be a better choice. For three-year

property, a straight-line life of 3, 5, or 12 years can be chosen. For five-year property, 5, 12, or 25 years may be used. In a given year, the same method must be used for all property of the same class life placed in service that year.

Investment Tax Credit

An investment tax credit is available in the year of purchase for new or used tangible personal property (and other Section 38 property) acquired for use in a trade or business or other income producing activity. The amount of the credit is 10% on five-year property, 6% on three-year property. (The credit is limited to the first $25,000 of tax liability and 85% of the excess, so an upper bracket taxpayer can't zero out his tax with investment credits.) It's hard to lose the credit since it may be carried back to the three prior years and forward fifteen years. Only $125,000 of the cost of used property is eligible for the credit. In general, any computer-related purchase that is subject to depreciation as three-year or five-year property is eligible for the credit.

However, the regular investment tax credit is available only to those taxpayers whose investment in depreciable property is "at risk." Amounts are *not* considered at risk if:

(1) The taxpayer is protected against the loss of the invested amount,
(2) The amount was borrowed and the taxpayer is not *personally* liable for the repayment of the debt, or
(3) The lender is a related creditor.

A related creditor is one who holds a 10% or greater ownership interest in the taxpayer's business or who is (or is related to) a seller or promoter of the taxpayer's interest in the property, except that a government agency is not a related creditor.

Borrowed amounts will be considered at risk if the taxpayer at all times has at least a 20% interest in the basis of the property that is at risk and the borrowed funds are provided by an unrelated financial institution, unrelated third-party lender, or a government agency.

The investment credit also reduces the basis for any depreciation by half the amount of the credit. In other words, you can't depreciate all of the credit—only half. As an alternative to reducing the depreciable basis by 50% of the ITC, a taxpayer may elect to reduce the regular investment tax credit by 2%. Thus, three-year property would have a 4% ITC and five-year property would be 8%. Normally this option would only benefit the upper bracket taxpayer who is not entitled to claim all of his available regular investment tax credit.

Choosing the Best Combination of Expensing, Depreciation, and Investment Credit

The best choice of tax benefit method is a function of a taxpayer's marginal tax brackets in the years involved combined with the time value of money. This involves equating tax savings with time, benefit, interest rates, and tax brackets. Five variables are difficult to illustrate in a two-dimensional graphical format, and there are a large number of possible combinations. Generally speaking, below the 40% marginal tax bracket, a five-year life, ACRS-accelerated depreciation method combined with a 10% investment tax credit yields the greatest present value.

In a high tax bracket, expensing is just about equal or sometimes better than the other methods and is certainly simpler to handle on the return. Beyond the maximum expensing limit ($5,000 in 1983, $10,000 in 1986) the best choice is three-year accelerated depreciation coupled with a 6% investment tax credit.

Additional Observations

The computer purchase can generate tax benefits if the taxpayer *itemizes* his deductions or has an income from a business, profession, or investment.

Employees whose total itemized deductions are less than their zero-bracket amount will lose most of the tax benefits discussed in this article. However, the investment tax credit would still be available to them even if they didn't itemize.

An item that is resold or traded-in before the end of its class life would be subject to recapture of some or all of the investment credit. This means that an individual might have to pay back the credit if he didn't hold on to the property. He would also owe tax on any gain realized from the sale, and that gain would be taxed at ordinary rates to the extent of any depreciation taken.

Some individuals might have to watch out for being classified as dealers. Stock-in-trade is not eligible for depreciation and investment credit. Also, for business expenses to be deductible they must be "ordinary and necessary." There is the possibility that the IRS might claim that a person spent too extravagantly (i.e., greater than "necessary"). However, this claim is unlikely to occur with computer-related expenditures.

Final Recommendations

While it is difficult to generalize in this area, most readers will want generalization. A typical purchaser with a fairly stable tax bracket would probably fare best with the following strategy:

(1) Develop documentation to support the contention that the computer is principally used for qualified purposes.
(2) Identify and make certain that all eligible deductions are taken.
(3) Deduct currently all expenditures with less than a one year useful life.
(4) In the below 40% marginal tax bracket:
    (a) Choose the five-year life on all long-term computer purchases.
    (b) Take the investment tax credit of 10%.
    (c) Depreciate over a five-year period using ACRS accelerated depreciation—remembering to first

reduce the depreciable basis by the amount of the ITC.

(5) In the above 40% marginal tax bracket:
   (a) Expense all long-term computer purchases up to the per-year maximum allowable ($5,000 in 1983).
   (b) For any excess expenditures choose a three-year life if it can be justified, otherwise pick five-year.
   (c) Take the investment tax credit (6% or 10% depending on asset life).
   (d) Depreciate over the appropriate life using ACRS accelerated depreciation—remembering to first reduce the depreciable bases by the amount of the ITC.

With proper strategy, Uncle Sam will pay back 20% to 40% of the costs of a computer.

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